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<b>UTILITY PATENT APPLICATION TRANSMITTAL</b> <i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i>	Attorney Docket No.	38-21(15454)B
	First Named Inventor or Application Identifier	FISHER, Dane K.
	Title	Nucleic Acid Molecules and Other Molecules Associated with Plants
	Express Mail Label No.	

<b>APPLICATION ELEMENTS</b> <i>See MPEP chapter 600 concerning utility patent application contents</i>	<b>ADDRESS TO:</b> Assistant Commissioner for Patent Box Patent Application Washington, DC 20231
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1. <input checked="" type="checkbox"/> *Fee Transmittal Form (Form PTO-1082) <i>(Submit an original and a duplicate for fee processing)</i>	6. <input type="checkbox"/> Microfiche Computer Program (Appendix)
2. <input checked="" type="checkbox"/> Specification [Total Pages 102] <i>(preferred arrangement set forth below)</i> <ul style="list-style-type: none"><li>- Descriptive title of the Invention</li><li>- Cross References to Related Applications</li><li>- Statement Regarding Fed sponsored R&amp;D</li><li>- Reference to Microfiche Appendix</li><li>- Background of the Invention</li><li>- Brief Summary of the Invention</li><li>- Brief Description of the Drawings (if filed)</li><li>- Detailed Description</li><li>- Claims</li><li>- Abstract of the Disclosure</li></ul>	7. Nucleotide and/or Amino Acid Sequence Submission <i>(if applicable, all necessary)</i> <ul style="list-style-type: none"><li>a. <input checked="" type="checkbox"/> Computer Readable Copy</li><li>b. <input checked="" type="checkbox"/> Paper Copy (identical to computer copy)</li><li>c. <input checked="" type="checkbox"/> Statement verifying identity of above copies</li></ul>
3. <input type="checkbox"/> Drawing(s) (35 USC 113) [Total Sheets ]	<b>ACCOMPANYING APPLICATION PARTS</b> 8. <input type="checkbox"/> Assignment Papers (cover sheet & document(s)) 9. <input type="checkbox"/> 37 CFR 3.73(b) Statement <input type="checkbox"/> Power of Attorney <i>(when there is an assignee)</i> 10. <input type="checkbox"/> English Translation Document <i>(if applicable)</i> 11. <input checked="" type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 <input checked="" type="checkbox"/> Copies of IDS Citations 12. <input type="checkbox"/> Preliminary Amendment 13. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) (Two) <i>(should be specifically itemized)</i> 14. <input type="checkbox"/> *Small Entity Statement(s) <input type="checkbox"/> Statement filed in prior application, Status still proper and desired 15. <input type="checkbox"/> Certified Copy of Priority Document(s) <i>(if foreign priority is claimed)</i> 16. <input type="checkbox"/> Other:
4. Oath or Declaration [Total Pages 6] <ul style="list-style-type: none"><li>a. <input checked="" type="checkbox"/> Newly executed (original or copy)</li><li>b. <input type="checkbox"/> Copy from a prior application (37 CFR 1.63(d)) <i>(for continuation/divisional with Box 17 completed)</i> [Note Box 5 below]</li><li>i. <input type="checkbox"/> <u>DELETION OF INVENTOR(S)</u> Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).</li></ul>	
5. <input type="checkbox"/> Incorporation By Reference <i>(useable if Box 4b is checked)</i> The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.	
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Signature		Lawrence M. Lavin Jr by David R. Marsh				Date		September 15, 1999			

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Reg. No. 41,408

ASSISTANT COMMISSIONER FOR PATENTS  
Washington, D.C. 20231

Sir:

Transmitted herewith for filing is the patent application of

Inventors: Dane K. FISHER *et al.*

For: Nucleic Acid Molecules and Other Molecules Associated with Plants

Enclosed are:

- ☒ A Combined Declaration and Power of Attorney, executed by inventor Dane K. Fisher (3 pages).
- ☒ A Combined Declaration and Power of Attorney, executed by inventor Raghunath V. Lalgudi (3 pages).
- ☒ An Information Disclosure Statement.
- ☒ Form PTO-1449 (3 pages) with 8 accompanying documents.
- ☒ Statement Regarding Sequence Listing.
- ☒ A CD-ROM containing the sequence listing.

The filing fee has been calculated as shown below:

(Col. 1)		(Col. 2)		SMALL ENTITY		OTHER THAN A SMALL ENTITY	
FOR	NO. FILED	NO. EXTRA	RATE	FEE	OR	RATE	FEE
BASIC FEE				\$ 395.00	OR		\$ 760.00
TOTAL CLAIMS	7 -20 =	* 0	x 9 =		OR	x 18 =	0.00
INDEP. CLAIMS	3 -3 =	* 0	x 39 =		OR	x 78 =	0.00
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENTED			+ 130 =		OR	+ 260 =	0.00
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☒ The issue fee set in 37 CFR 1.18 at or before mailing of the Notice of Allowance, pursuant to 37 CFR 1.311(b).

☒ Any filing fees under 37 CFR 1.16 for presentation of extra claims.

Date September 15, 1999

*Lawrence M. Lavin, Jr.*

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September 15, 1999

Assistant Commissioner for Patents  
Washington, D.C. 20231

**Box Patent Application**

Re: U.S. Non-Provisional Utility Patent Application  
Application No.: To Be Assigned  
Filed: Herewith  
For: **Nucleic Acid Molecules and Other Molecules  
Associated with Plants**  
Inventors: Dane K. FISHER *et al.*  
Atty. Docket: 38-21(15454)B

Sir:

The following documents are forwarded herewith for appropriate action by the U.S.  
Patent and Trademark Office:

1. Utility Patent Application Transmittal (PTO/SB/05);
2. Form PTO-1082 (in duplicate);
3. U.S. Utility Patent Application entitled:

**Nucleic Acid Molecules and Other Molecules Associated with Plants**

and naming as inventors:

**Dane K. FISHER and Raghunath V. LALGUDI**

the application consisting of:

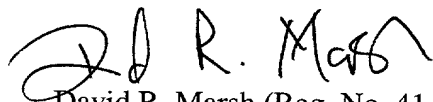
- a. A specification containing:
  - (i) 100 pages of a description prior to the claims;
  - (ii) 1 page of claims (7 claims);
  - (iii) a one (1) page abstract; and
  - (iv) 24,446 pages of a sequence listing;

4. A Combined Declaration and Power of Attorney, executed by inventor Dane K. Fisher (3 pages);
5. A Combined Declaration and Power of Attorney, executed by inventor Raghunath V. Lalgudi (3 pages);
6. Statement Regarding Sequence Submission;
7. A CD-ROM containing the sequence listing;
8. Information Disclosure Statement;
9. Form PTO-1449 (3 pages), with 8 accompanying documents;
10. Howrey & Simon Check No. 316232 in the amount of \$760.00 to cover the basic filing fee; and
11. Two (2) return postcards.

It is respectfully requested that, of the two attached postcards, one be stamped with the filing date of these documents and returned to our courier, and the other, prepaid postcard, be stamped with the filing date and unofficial application number and returned as soon as possible.

In accordance with 37 C.F.R. § 1.821(f), the paper copy of the sequence listing and the computer readable copy of the sequence listing submitted herewith in the above application are the same.

Respectfully submitted,



David R. Marsh (Reg. No. 41,408)

Enclosures

# NUCLEIC ACID MOLECULES AND OTHER MOLECULES ASSOCIATED WITH PLANTS

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## Field of the Invention

The present invention is in the field of plant biochemistry. More specifically the invention relates to nucleic acid molecules that encode proteins and fragments of proteins produced in plant cells, in particular, maize plants. The invention also relates to proteins and fragments of proteins so encoded and antibodies capable of binding the proteins. The invention also relates to methods of using the nucleic acid molecules, proteins and fragments of proteins.

## Background of the Invention

### I. EXPRESSED SEQUENCE TAG NUCLEIC ACID MOLECULES

Expressed sequence tags, or ESTs, are short sequences of randomly selected clones from a cDNA (or complementary DNA) library which are representative of the cDNA inserts of these randomly selected clones. McCombie, *et al.*, *Nature Genetics*, 1:124-130 (1992); Kurata, *et al.*, *Nature Genetics*, 8: 365-372 (1994); Okubo, *et al.*, *Nature Genetics*, 2: 173-179 (1992), all of which references are incorporated herein in their entirety.

Using conventional methodologies, cDNA libraries can be constructed from the mRNA (messenger RNA) of a given tissue or organism using poly dT primers and reverse transcriptase (Efstratiadis, *et al.*, *Cell* 7:279-288 (1976), the entirety of which is herein incorporated by reference; Higuchi, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 73:3146-3150 (1976), the entirety of which is herein incorporated by reference; Maniatis, *et al.*, *Cell* 8:163 (1976) the entirety of which is herein incorporated by reference; Land, *et al.*, *Nucleic Acids Res.* 9:2251-2266 (1981), the entirety of which is herein incorporated by

reference; Okayama, *et al.*, *Mol. Cell. Biol.* 2:161-170 (1982), the entirety of which is herein incorporated by reference; Gubler, *et al.*, *Gene* 25:263 (1983), the entirety of which is herein incorporated by reference).

Several methods may be employed to obtain full-length cDNA constructs. For example, terminal transferase can be used to add homopolymeric tails of dC residues to the free 3' hydroxyl groups (Land, *et al.*, *Nucleic Acids Res.* 9:2251-2266 (1981), the entirety of which is herein incorporated by reference). This tail can then be hybridized by a poly dG oligo which can act as a primer for the synthesis of full length second strand cDNA. Okayama and Berg, report a method for obtaining full length cDNA constructs.

This method has been simplified by using synthetic primer-adapters that have both homopolymeric tails for priming the synthesis of the first and second strands and restriction sites for cloning into plasmids (Coleclough, *et al.*, *Gene* 34:305-314 (1985), the entirety of which is herein incorporated by reference) and bacteriophage vectors (Krawinkel, *et al.*, *Nucleic Acids Res.* 14:1913 (1986), the entirety of which is herein incorporated by reference; and Han, *et al.*, *Nucleic Acids Res.* 15:6304 (1987), the entirety of which is herein incorporated by reference).

These strategies have been coupled with additional strategies for isolating rare mRNA populations. For example, a typical mammalian cell contains between 10,000 and 30,000 different mRNA sequences. Davidson, *Gene Activity in Early Development*, 2nd ed., Academic Press, New York (1976). The number of clones required to achieve a given probability that a low-abundance mRNA will be present in a cDNA library is  $N = (\ln(1-P))/(\ln(1-1/n))$  where N is the number of clones required, P is the probability desired, and 1/n is the fractional proportion of the total mRNA that is represented by a single rare mRNA. (Sambrook, *et al.*, *Molecular Cloning: A Laboratory Manual*, 2nd ed., Cold Spring Harbor Laboratory Press (1989), the entirety of which is herein incorporated by reference.).

A method to enrich preparations of mRNA for sequences of interest is to fractionate by size. One such method is to fractionate by electrophoresis through an agarose gel (Pennica, *et al.*, *Nature* 301:214-221 (1983), the entirety of which is herein incorporated by reference). Another such method employs sucrose gradient centrifugation in the presence of an agent, such as methylmercuric hydroxide, that denatures secondary structure in RNA (Schweinfest, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 79:4997-5000 (1982), the entirety of which is herein incorporated by reference).

A frequently adopted method is to construct equalized or normalized cDNA libraries (Ko, *Nucleic Acids Res.* 18:5705-5711 (1990), the entirety of which is herein incorporated by reference; Patanjali, S. R. *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 88:1943-1947 (1991), the entirety of which is herein incorporated by reference). Typically, the cDNA population is normalized by subtractive hybridization. Schmid, *et al.*, *J. Neurochem.* 48:307-312 (1987) the entirety of which is herein incorporated by reference; Fargnoli, *et al.*, *Anal. Biochem.* 187:364-373 (1990) the entirety of which is herein incorporated by reference; Travis, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 85:1696-1700 (1988) the entirety of which is herein incorporated by reference; Kato, *Eur. J. Neurosci.* 2:704 (1990); and Schweinfest, *et al.*, *Genet. Anal. Tech. Appl.* 7:64 (1990), the entirety of which is herein incorporated by reference). Subtraction represents another method for reducing the population of certain sequences in the cDNA library. Swaroop, *et al.*, *Nucleic Acids Res.* 19:1954 (1991), the entirety of which is herein incorporated by reference).

ESTs can be sequenced by a number of methods. Two basic methods may be used for DNA sequencing, the chain termination method of Sanger *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 74: 5463-5467 (1977), the entirety of which is herein incorporated by reference and the chemical degradation method of Maxam and Gilbert, *Proc. Nat. Acad. Sci. (U.S.A.)* 74: 560-564 (1977), the entirety of which is herein incorporated by reference. Automation and advances in technology such as the replacement of

radioisotopes with fluorescence-based sequencing have reduced the effort required to sequence DNA (Craxton, *Methods*, 2: 20-26 (1991), the entirety of which is herein incorporated by reference; Ju *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 92: 4347-4351 (1995), the entirety of which is herein incorporated by reference; Tabor and Richardson, *Proc.*

5 *Natl. Acad. Sci. (U.S.A.)* 92: 6339-6343 (1995), the entirety of which is herein incorporated by reference). Automated sequencers are available from, for example, Pharmacia Biotech, Inc., Piscataway, New Jersey (Pharmacia ALF), LI-COR, Inc., Lincoln, Nebraska (LI-COR 4,000) and Millipore, Bedford, Massachusetts (Millipore BaseStation).

10 In addition, advances in capillary gel electrophoresis have also reduced the effort required to sequence DNA and such advances provide a rapid high resolution approach for sequencing DNA samples (Swerdlow and Gesteland, *Nucleic Acids Res.* 18:1415-1419 (1990); Smith, *Nature* 349:812-813 (1991); Luckey *et al.*, *Methods Enzymol.* 218:154-172 (1993); Lu *et al.*, *J. Chromatog. A.* 680:497-501 (1994); Carson *et al.*, *Anal.*  
15 *Chem.* 65:3219-3226 (1993); Huang *et al.*, *Anal. Chem.* 64:2149-2154 (1992); Kheterpal *et al.*, *Electrophoresis* 17:1852-1859 (1996); Quesada and Zhang, *Electrophoresis* 17:1841-1851 (1996); Baba, *Yakugaku Zasshi* 117:265-281 (1997), all of which are herein incorporated by reference in their entirety).

ESTs longer than 150 bases have been found to be useful for similarity searches  
20 and mapping. (Adams, *et al.*, *Science* 252:1651-1656 (1991), herein incorporated by reference.) EST sequences normally range from 150-450 bases. This is the length of sequence information that is routinely and reliably generated using single run sequence data. Typically, only single run sequence data is obtained from the cDNA library, Adams, *et al.*, *Science* 252:1651-1656 (1991). Automated single run sequencing  
25 typically results in an approximately 2-3% error or base ambiguity rate. (Boguski, *et al.*, *Nature Genetics*, 4:332-333 (1993), the entirety of which is herein incorporated by reference).

- EST databases have been constructed or partially constructed from, for example, *C. elegans* (McCombie, *et al.*, *Nature Genetics* 1:124-131 (1992), human liver cell line HepG2 (Okubo, *et al.*, *Nature Genetics* 2:173-179 (1992)), human brain RNA (Adams, *et al.*, *Science* 252:1651-1656 (1991); Adams, *et al.*, *Nature* 355:632-635 (1992)),
- 5 *Arabidopsis*, (Newman, *et al.*, *Plant Physiol.* 106:1241-1255 (1994)); and rice (Kurata, *et al.*, *Nature Genetics* 8:365-372 (1994)).

## II. SEQUENCE COMPARISONS

- A characteristic feature of a protein or DNA sequence is that it can be compared with other known protein or DNA sequences. Sequence comparisons can be undertaken
- 10 by determining the similarity of the test or query sequence with sequences in publicly available or propriety databases ("similarity analysis") or by searching for certain motifs ("intrinsic sequence analysis")(e.g. *cis* elements)(Coulson, *Trends in Biotechnology*, 12: 76-80 (1994), the entirety of which is herein incorporated by reference; Birren, *et al.*, *Genome Analysis*, 1: 543-559 (1997), the entirety of which is herein incorporated by
- 15 reference).

- Similarity analysis includes database search and alignment. Examples of public databases include the DNA Database of Japan (DDBJ)(<http://www.ddbj.nig.ac.jp/>); Genebank (<http://www.ncbi.nlm.nih.gov/web/Genbank/Index.html>); and the European Molecular Biology Laboratory Nucleic Acid Sequence Database (EMBL)
- 20 ([http://www.ebi.ac.uk/ebi\\_docs/embl\\_db.html](http://www.ebi.ac.uk/ebi_docs/embl_db.html)). A number of different search algorithms have been developed, one example of which are the suite of programs referred to as BLAST programs. There are five implementations of BLAST, three designed for nucleotide sequences queries (BLASTN, BLASTX, and TBLASTX) and two designed for protein sequence queries (BLASTP and TBLASTN) (Coulson, *Trends in*
- 25 *Biotechnology*, 12: 76-80 (1994); Birren, *et al.*, *Genome Analysis*, 1: 543-559 (1997)).

BLASTN takes a nucleotide sequence (the query sequence) and its reverse complement and searches them against a nucleotide sequence database. BLASTN was designed for speed, not maximum sensitivity, and may not find distantly related coding sequences. BLASTX takes a nucleotide sequence, translates it in three forward reading frames and three reverse complement reading frames, and then compares the six translations against a protein sequence database. BLASTX is useful for sensitive analysis of preliminary (single-pass) sequence data and is tolerant of sequencing errors (Gish and States, *Nature Genetics*, 3: 266-272 (1993), the entirety of which is herein incorporated by reference). BLASTN and BLASTX may be used in concert for analyzing EST data (Coulson, *Trends in Biotechnology*, 12: 76-80 (1994); Birren, *et al.*, *Genome Analysis*, 1: 543-559 (1997).

Given a coding nucleotide sequence and the protein it encodes, it is often preferable to use the protein as the query sequence to search a database because of the greatly increased sensitivity to detect more subtle relationships. This is due to the larger alphabet of proteins (20 amino acids) compared with the alphabet of nucleic acid sequences (4 bases), where it is far easier to obtain a match by chance. In addition, with nucleotide alignments, only a match (positive score) or a mismatch (negative score) is obtained, but with proteins, the presence of conservative amino acid substitutions can be taken into account. Here, a mismatch may yield a positive score if the non-identical residue has physical/chemical properties similar to the one it replaced. Various scoring matrices are used to supply the substitution scores of all possible amino acid pairs. A general purpose scoring system is the BLOSUM62 matrix (Henikoff and Henikoff, *Proteins*, 17: 49-61 (1993), the entirety of which is herein incorporated by reference), which is currently the default choice for BLAST programs. BLOSUM62 is tailored for alignments of moderately diverged sequences and thus may not yield the best results under all conditions. Altschul, *J. Mol. Biol.* 36: 290-300 (1993), the entirety of which is herein incorporated by reference, uses a combination of three matrices to cover all



contingencies. This may improve sensitivity, but at the expense of slower searches. In practice, a single BLOSUM62 matrix is often used but others (PAM40 and PAM250) may be attempted when additional analysis is necessary. Low PAM matrices are directed at detecting very strong but localized sequence similarities, whereas high PAM matrices are directed at detecting long but weak alignments between very distantly related sequences.

Homologues in other organisms are available that can be used for comparative sequence analysis. Multiple alignments are performed to study similarities and differences in a group of related sequences. CLUSTAL W is a multiple sequence alignment package available that performs progressive multiple sequence alignments based on the method of Feng and Doolittle, *J. Mol. Evol.* 25: 351-360 (1987), the entirety of which is herein incorporated by reference. Each pair of sequences is aligned and the distance between each pair is calculated; from this distance matrix, a guide tree is calculated, and all of the sequences are progressively aligned based on this tree. A feature of the program is its sensitivity to the effect of gaps on the alignment; gap penalties are varied to encourage the insertion of gaps in probable loop regions instead of in the middle of structured regions. Users can specify gap penalties, choose between a number of scoring matrices, or supply their own scoring matrix for both the pairwise alignments and the multiple alignments. CLUSTAL W for UNIX and VMS systems is available at: [ftp.ebi.ac.uk](ftp://ftp.ebi.ac.uk). Another program is MACAW (Schuler *et al.*, *Proteins, Struct. Func. Genet.* 9:180-190 (1991), the entirety of which is herein incorporated by reference, for which both Macintosh and Microsoft Windows versions are available. MACAW uses a graphical interface, provides a choice of several alignment algorithms, and is available by anonymous ftp at: [ncbi.nlm.nih.gov \(directory/pub/macaw\)](ftp://ncbi.nlm.nih.gov/directory/pub/macaw).

Sequence motifs are derived from multiple alignments and can be used to examine individual sequences or an entire database for subtle patterns. With motifs, it is sometimes possible to detect distant relationships that may not be demonstrable based on

comparisons of primary sequences alone. Currently, the largest collection of sequence motifs in the world is PROSITE (Bairoch and Bucher, *Nucleic Acid Research*, 22: 3583-3589 (1994), the entirety of which is herein incorporated by reference.) PROSITE may be accessed via either the ExPASy server on the World Wide Web or anonymous ftp site.

- 5 Many commercial sequence analysis packages also provide search programs that use PROSITE data.

A resource for searching protein motifs is the BLOCKS E-mail server developed by S. Henikoff, *Trends Biochem Sci.*, 18:267-268 (1993), the entirety of which is herein incorporated by reference; Henikoff and Henikoff, *Nucleic Acid Research*, 19:6565-6572  
 10 (1991), the entirety of which is herein incorporated by reference; Henikoff and Henikoff, *Proteins*, 17: 49-61 (1993). BLOCKS searches a protein or nucleotide sequence against a database of protein motifs or "blocks." Blocks are defined as short, ungapped multiple alignments that represent highly conserved protein patterns. The blocks themselves are derived from entries in PROSITE as well as other sources. Either a protein or nucleotide  
 15 query can be submitted to the BLOCKS server; if a nucleotide sequence is submitted, the sequence is translated in all six reading frames and motifs are sought in these conceptual translations. Once the search is completed, the server will return a ranked list of significant matches, along with an alignment of the query sequence to the matched BLOCKS entries.

- 20 Conserved protein domains can be represented by two-dimensional matrices, which measure either the frequency or probability of the occurrences of each amino acid residue and deletions or insertions in each position of the domain. This type of model, when used to search against protein databases, is sensitive and usually yields more accurate results than simple motif searches. Two popular implementations of this  
 25 approach are profile searches (such as GCG program ProfileSearch) and Hidden Markov Models (HMMs)(Krough *et al.*, *J. Mol. Biol.* 235:1501-1531 (1994); Eddy, *Current Opinion in Structural Biology* 6:361-365 (1996), both of which are herein incorporated

by reference in their entirety). In both cases, a large number of common protein domains have been converted into profiles, as present in the PROSITE library, or HMM models, as in the Pfam protein domain library (Sonnhammer *et al.*, *Proteins* 28:405-420 (1997), the entirety of which is herein incorporated by reference). Pfam contains more than 500

5 HMM models for enzymes, transcription factors, signal transduction molecules, and structural proteins. Protein databases can be queried with these profiles or HMM models, which will identify proteins containing the domain of interest. For example, HMMSW or HMMFS, two programs in a public domain package called HMMER (Sonnhammer *et al.*, *Proteins* 28:405-420 (1997)) can be used.

10 PROSITE and BLOCKS represent collected families of protein motifs. Thus, searching these databases entails submitting a single sequence to determine whether or not that sequence is similar to the members of an established family. Programs working in the opposite direction compare a collection of sequences with individual entries in the protein databases. An example of such a program is the Motif Search Tool, or MoST  
 15 (Tatusov *et al. Proc. Natl. Acad. Sci.* 91: 12091-12095 (1994), the entirety of which is herein incorporated by reference.) On the basis of an aligned set of input sequences, a weight matrix is calculated by using one of four methods (selected by the user); a weight matrix is simply a representation, position by position in an alignment, of how likely a particular amino acid will appear. The calculated weight matrix is then used to search the  
 20 databases. To increase sensitivity, newly found sequences are added to the original data set, the weight matrix is recalculated, and the search is performed again. This procedure continues until no new sequences are found.

### **Summary of the Invention**

The present invention provides a substantially purified nucleic acid molecule that  
 25 encodes a maize protein or fragment thereof comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 57264.

The present invention also provides one or more substantially purified nucleic acid molecules comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof.

5 The present invention also provides a substantially purified maize protein or fragment thereof, wherein said maize protein is encoded by a nucleic acid molecule that comprises a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 57264.

10 The present invention further provides a substantially purified protein, peptide, or fragment thereof encoded by a nucleic acid sequence which specifically hybridizes to a nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of a complement of SEQ ID NO: 1 through SEQ ID NO:57264.

15 The present invention further provides a substantially purified antibody capable of specifically binding to a protein or fragment thereof encoded by a nucleic acid sequence which specifically hybridizes to a nucleic acid molecule having a nucleic acid sequence selected from the group consisting of a complement of SEQ ID NO:1 through SEQ ID NO:57264.

20 The present invention also provides a transformed plant transformed to contain a nucleic acid molecule which comprises: (A) an exogenous promoter region which functions in plant cells to cause the production of an mRNA molecule; which is linked to (B) a structural nucleic acid molecule, wherein said structural nucleic acid molecule comprises a nucleic acid molecule that encodes a protein, peptide, or fragment thereof which hybridizes to a nucleic acid sequence selected from the group consisting of a complement of SEQ ID NO:1 through SEQ ID NO:57264 expressed in an effective amount to produce a desirable agronomic effect; which is linked to (C) a 3' non-  
25 translated sequence that functions in plant cells to cause the termination of transcription and the addition of polyadenylated ribonucleotides to the 3' end of the mRNA sequence.

The present invention also provides a transformed plant cell containing a nucleic acid molecule whose non-transcribed strand encodes a protein or fragment thereof, wherein the transcribed strand of said nucleic acid is complementary to a nucleic acid molecule that encodes a protein or fragment thereof. The present invention also provides  
 5 bacterial, viral, microbial, and plant cells comprising a nucleic acid molecule of the present invention

The present invention also provides a method of producing a plant containing one or more proteins encoded by sequences comprising SEQ ID NO:1 or complement thereof through SEQ ID NO:57264 or complements thereof, expressed in a sufficient amount  
 10 and/or fashion to produce a desirable agronomic effect.

In accomplishing the foregoing, there is provided, in accordance with one aspect of the present invention, methods of producing genetically transformed plants, comprising the steps of:

- (a) inserting into the genome of a plant cell a recombinant, double-stranded  
 15 DNA molecule comprising
  - (i) a promoter which functions in plant cells to cause the production of an RNA sequence,
  - (ii) a structural DNA sequence that causes the production of an RNA sequence which encodes a desired protein.
  - (iii) a 3' non-translated DNA sequence which functions in plant cells to  
 20 cause the addition of polyadenylated nucleotides to the 3' end of RNA sequence; where the promoter is homologous or heterologous with respect to the coding sequence and adapted to cause sufficient expression of a protein in desired plant tissues to enhance the  
 25 agronomic utility of a plant transformed with said gene.

- (b) obtaining a transformed plant cell with said nucleic acid molecule that encodes one or more proteins, wherein said nucleic acid molecule is transcribed and results in expression of said protein(s); and
- (c) regenerating from the transformed plant cell a genetically transformed plant

The present invention also encompasses differentiated plants, seeds, and progeny comprising said transformed plant cells and which exhibit novel properties of agronomic significance.

The present invention also provides a method of producing a plant containing reduced levels of a protein comprising: (A) transforming a plant cell with a nucleic acid molecule that encodes a protein, wherein said nucleic acid molecule is transcribed and results in co-suppression of endogenous protein synthesis activity, and (B) regenerating plants and producing subsequent progeny from the transformed plant.

The present invention also provides a method of determining an association between a polymorphism and a plant trait comprising: (A) hybridizing a nucleic acid molecule specific for a polymorphism to genetic material of a plant, wherein said nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof; and (B) calculating the degree of association between the polymorphism and the plant trait.

The present invention also provides a method of isolating a genetic region, or nucleic acid that encodes a protein or fragment thereof comprising: (A) incubating under conditions permitting nucleic acid hybridization: a marker nucleic acid molecule, preferably an EST, with a complementary nucleic acid molecule obtained from a plant cell or plant tissue; (B) permitting hybridization between said marker nucleic acid molecule, preferably an EST, and said complementary nucleic acid molecule obtained from said plant cell or plant tissue; and (C) isolating said complementary nucleic acid molecule.

The present invention also provides a method for determining a level or pattern in a plant cell of a protein in a plant comprising: (A) incubating, under conditions permitting nucleic acid hybridization, a marker nucleic acid molecule, the marker nucleic acid molecule selected from the group of marker nucleic acid molecules which

- 5 specifically hybridize to a nucleic acid molecule having the nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 57264 or complements thereof or fragments of either, with a complementary nucleic acid molecule obtained from the plant cell or plant tissue, wherein nucleic acid hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained
- 10 from the plant cell or plant tissue permits the detection of an mRNA for the enzyme; (B) permitting hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant cell or plant tissue; and (C) detecting the level or pattern of the complementary nucleic acid, wherein the detection of the complementary nucleic acid is predictive of the level or pattern of the protein.

- 15 The present invention also provides a method for determining the level or pattern of a protein in a plant cell or plant tissue comprising: (A) incubating under conditions permitting nucleic acid hybridization: a marker nucleic acid molecule, the marker nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 57264 or complements thereof, with a
- 20 complementary nucleic acid molecule obtained from a plant cell or plant tissue, wherein nucleic acid hybridization between the marker nucleic acid molecule, and the complementary nucleic acid molecule obtained from the plant cell or plant tissue permits the detection of said protein; (B) permitting hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant cell
- 25 or plant tissue; and (C) detecting the level or pattern of the complementary nucleic acid, wherein the detection of said complementary nucleic acid is predictive of the level or pattern of the protein synthesis.

The present invention also provides a method for determining a level or pattern of a protein in a plant cell or plant tissue which comprises assaying the concentration of a molecule, whose concentration is dependent upon the expression of a gene, the gene having a nucleic acid sequence which specifically hybridizes to a protein marker nucleic acid molecule, the molecule being present in a plant cell or plant tissue, in comparison to the concentration of that molecule present in a plant cell or plant tissue with a known level or pattern of said protein, wherein an assayed concentration of the molecule is compared to the assayed concentration of the molecule in a plant cell or plant tissue with a known level or pattern of said protein.

The present invention also provides a method of determining a mutation in a plant whose presence is predictive of a mutation affecting a level or pattern of a protein comprising the steps: (A) incubating, under conditions permitting nucleic acid hybridization, a marker nucleic acid, the marker nucleic acid selected from the group of marker nucleic acid molecules which specifically hybridize to a nucleic acid molecule consisting of the nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 57264 or complements thereof or fragments of either and a complementary nucleic acid molecule obtained from the plant, wherein nucleic acid hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant permits the detection of a polymorphism whose presence is predictive of a mutation affecting the level or pattern of the protein in the plant; (B) permitting hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant; and (C) detecting the presence of the polymorphism, wherein the detection of the polymorphism is predictive of the mutation.

The present invention also provides a method for determining a mutation in a plant whose presence is predictive of a mutation affecting the level or pattern of protein synthesis comprising the steps: (A) incubating under conditions permitting nucleic acid



hybridization: a marker nucleic acid molecule, the marker nucleic acid molecule comprising a nucleic acid molecule that is linked to gene, the gene having a nucleic acid sequence which specifically hybridizes to a sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO:57264 and complements thereof, and a

- 5 complementary nucleic acid molecule obtained from a plant tissue or plant cell of the plant, wherein nucleic acid hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant permits the detection of a polymorphism whose presence is predictive of a mutation affecting said level or pattern of a protein synthesis in the plant; (B) permitting hybridization between said marker
- 10 nucleic acid molecule and said complementary nucleic acid molecule obtained from said plant; and; (C) detecting the presence of the polymorphism, wherein the detection of the polymorphism is predictive of the mutation.

- The present invention also provides a method for reducing expression of a protein in a plant cell, the method comprising: growing a transformed plant cell containing a
- 15 nucleic acid molecule whose non-transcribed strand encodes a protein or fragment thereof, wherein the transcribed strand of said nucleic acid is complementary to a nucleic acid molecule that encodes the protein in said plant cell, and whereby the strand that is complementary to the nucleic acid molecule that encodes the protein reduces or depresses expression of the protein.

- 20 The present invention provides maize nucleic acid molecules for use as molecular tags to isolate genetic regions (i.e. promoters and flanking sequences), isolate genes, map genes, and determine gene function. The present invention further provides maize nucleic acid molecules for use in determining if genes are members of a particular gene family.

- 25 The present invention also provides a method of obtaining full length genes using maize ESTs or complements thereof or fragments of either.

The present invention also provides a method of isolating promoters and flanking sequences using maize ESTs or complements thereof or fragments of either.

The present invention also provides maize ESTs or complements thereof or fragments of either for use in marker-assisted breeding programs.

5       The present invention also provides a method of identifying tissues comprising hybridizing nucleic acids from the tissue with maize ESTs or complements thereof or fragments of either.

10       The present invention also provides a method for production of antibodies targeted against the proteins, peptides, or fragments produced by the disclosed or complements thereof or fragments of either.

The present invention also provides a method for the transformation and regeneration of plants comprising sequences hybridizable to the disclosed ESTs or complements thereof or fragments of either.

15       The present invention also provides a method of modifying plant protein expression by inserting in a chimeric gene sense or antisense constructs of the maize ESTs.

### **Detailed Description of the Invention**

#### **Agents**

##### **(a) Nucleic Acid Molecules**

20       Agents of the present invention include nucleic acid molecules and more specifically EST nucleic acid molecules or nucleic acid fragment molecules thereof. Fragment EST nucleic acid molecules may encode significant portion(s) of, or indeed most of, the EST nucleic acid molecule. Alternatively, the fragments may comprise smaller oligonucleotides (having from about 15 to about 250 nucleotide residues, and  
25       more preferably, about 15 to about 30 nucleotide residues).

A subset of the nucleic acid molecules of the present invention includes nucleic acid molecules that are marker molecules. Another subset of the nucleic acid molecules of the present invention include nucleic acid molecules that encode a protein or fragment thereof. Another subset of the nucleic acid molecules of the present invention are EST molecules.

As used herein, an agent, be it a naturally occurring molecule or otherwise may be “substantially purified,” if desired, such that one or more molecules that is or may be present in a naturally occurring preparation containing that molecule will have been removed or will be present at a lower concentration than that at which it would normally be found.

The agents of the present invention will preferably be “biologically active” with respect to either a structural attribute, such as the capacity of a nucleic acid to hybridize to another nucleic acid molecule, or the ability of a protein to be bound by antibody (or to compete with another molecule for such binding). Alternatively, such an attribute may be catalytic, and thus involve the capacity of the agent to mediate a chemical reaction or response.

The agents of the present invention may also be recombinant. As used herein, the term recombinant means any agent (e.g. DNA, peptide etc.), that is, or results, however indirect, from human manipulation of a nucleic acid molecule.

It is understood that the agents of the present invention may be labeled with reagents that facilitate detection of the agent (e.g. fluorescent labels (Prober, *et al.*, *Science* 238:336-340 (1987); Albarella *et al.*, EP 144914, chemical labels (Sheldon *et al.*, U.S. Patent 4,582,789; Albarella *et al.*, U.S. Patent 4,563,417, modified bases (Miyoshi *et al.*, EP 119448, all of which are hereby incorporated by reference in their entirety).

It is further understood, that the present invention provides bacterial, viral, microbial, and plant cells comprising the agents of the present invention.

Nucleic acid molecules or fragment thereof of the present invention are capable of specifically hybridizing to other nucleic acid molecules under certain circumstances. As used herein, two nucleic acid molecules are said to be capable of specifically hybridizing to one another if the two molecules are capable of forming an anti-parallel, double-

5 stranded nucleic acid structure. A nucleic acid molecule is said to be the "complement" of another nucleic acid molecule if they exhibit complete complementarity. As used herein, molecules are said to exhibit "complete complementarity" when every nucleotide of one of the molecules is complementary to a nucleotide of the other. Two molecules are said to be "minimally complementary" if they can hybridize to one another with

10 sufficient stability to permit them to remain annealed to one another under at least conventional "low-stringency" conditions. Similarly, the molecules are said to be "complementary" if they can hybridize to one another with sufficient stability to permit them to remain annealed to one another under conventional "high-stringency" conditions. Conventional stringency conditions are described by Sambrook, *et al.*, In: *Molecular*

15 *Cloning, A Laboratory Manual, 2nd Edition, Cold Spring Harbor Press, Cold Spring Harbor, New York (1989)*, and by Haymes, *et al.* In: *Nucleic Acid Hybridization, A Practical Approach*, IRL Press, Washington, DC (1985), the entirety of which is herein incorporated by reference. Departures from complete complementarity are therefore permissible, as long as such departures do not completely preclude the capacity of the

20 molecules to form a double-stranded structure. Thus, in order for an nucleic acid molecule or fragment of the present invention to serve as a primer or probe it need only be sufficiently complementary in sequence to be able to form a stable double-stranded structure under the particular solvent and salt concentrations employed.

Appropriate stringency conditions which promote DNA hybridization are, for

25 example, 6.0 x sodium chloride/sodium citrate (SSC) at about 45°C, followed by a wash of 2.0 x SSC at 50°C, are known to those skilled in the art or can be found in *Current Protocols in Molecular Biology*, John Wiley & Sons, N.Y. (1989), 6.3.1-6.3.6. For

example, the salt concentration in the wash step can be selected from a low stringency of about 2.0 x SSC at 50°C to a high stringency of about 0.2 x SSC at 50°C. In addition, the temperature in the wash step can be increased from low stringency conditions at room temperature, about 22°C, to high stringency conditions at about 65°C. Both temperature and salt may be varied, or either the temperature or the salt concentration may be held constant while the other variable is changed.

In a preferred embodiment, a nucleic acid of the present invention will specifically hybridize to one or more of the nucleic acid molecules set forth in SEQ ID NO: 1 through SEQ ID NO: 57264 or complements thereof under moderately stringent conditions, for example, at about 2.0 x SSC and about 65°C.

In a particularly preferred embodiment, a nucleic acid of the present invention will include those nucleic acid molecules that specifically hybridize to one or more of the nucleic acid molecules set forth in SEQ ID NO:1 through SEQ ID NO: 57264 or complements thereof under high stringency conditions.

In one aspect of the present invention, the nucleic acid molecules of the present invention have one or more of the nucleic acid sequences set forth in SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof. In another aspect of the present invention, one or more of the nucleic acid molecules of the present invention share between 100% and 90% sequence identity with one or more of the nucleic acid sequences set forth in SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof. In a further aspect of the present invention, one or more of the nucleic acid molecules of the present invention share between 100% and 95% sequence identity with one or more of the nucleic acid sequences set forth in SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof. In a more preferred aspect of the present invention, one or more of the nucleic acid molecules of the present invention share between 100% and 98% sequence identity with one or more of the nucleic acid sequences set forth in SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof. In an even more preferred aspect

of the present invention, one or more of the nucleic acid molecules of the present invention share between 100% and 99% sequence identity with one or more of the sequences set forth in SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof. In a further, even more preferred aspect of the present invention, one or more of

5 the nucleic acid molecules of the present invention exhibit 100% sequence identity with one or more nucleic acid molecules present within the cDNA libraries LIB143, LIB148, LIB189, LIB3059, LIB3060, LIB3062, LIB3066, LIB3067, LIB3068, LIB3069, LIB3075, LIB3076, LIB3078, LIB3079, and LIB3088 (Monsanto Company, St. Louis, Missouri, United States of America).

10 In a preferred embodiment of the present invention, a maize protein or fragment thereof of the present invention is a homologue of another plant protein. In another preferred embodiment of the present invention, a maize protein or fragment thereof of the present invention is a homologue of a fungal protein. In another preferred embodiment of the present invention, a maize protein or fragment thereof of the present invention is a

15 homologue of a mammalian protein. In another preferred embodiment of the present invention, a maize protein or fragment thereof of the present invention is a homologue of an algal protein. In another preferred embodiment of the present invention, a maize protein or fragment thereof of the present invention is a homologue of a bacterial protein. In another preferred embodiment of the present invention, a maize protein or fragment

20 thereof of the present invention is a homologue of a soybean protein.

In a preferred embodiment of the present invention, the nucleic molecule of the present invention encodes a maize protein or fragment thereof where a maize protein or fragment thereof exhibits a BLAST probability score of greater than  $1E-12$ , preferably a BLAST probability score of between about  $1E-30$  and about  $1E-12$ , even more preferably

25 a BLAST probability score of greater than  $1E-30$  with its homologue.

In another preferred embodiment of the present invention, the nucleic acid molecule encoding a maize protein or fragment thereof exhibits a % identity with its

homologue of between about 25% and about 40%, more preferably of between about 40% and about 70%, even more preferably of between about 70% and about 90% and even more preferably between about 90% and 99%. In another preferred embodiment, of the present invention, a maize protein or fragment thereof exhibits a % identity with its  
5 homologue of 100%.

In a preferred embodiment of the present invention, the nucleic acid molecule of the present invention encodes a maize protein or fragment thereof where the maize protein exhibits a BLAST score of greater than 120, preferably a BLAST score of between about 1450 and about 120, even more preferably a BLAST score of greater than  
10 1450 with its homologue.

Nucleic acid molecules of the present invention also include non-maize homologues. Preferred non-maize homologues are selected from the group consisting of alfalfa, *Arabidopsis*, barley, *Brassica*, broccoli, cabbage, citrus, cotton, garlic, oat, oilseed rape, onion, canola, flax, an ornamental plant, pea, peanut, pepper, potato, rice, rye,  
15 sorghum, soybean strawberry, sugarcane, sugarbeet, tomato, wheat, poplar, pine, fir, eucalyptus, apple, lettuce, lentils, grape, banana, tea, turf grasses, sunflower, oil palm and *Phaseolus*.

The degeneracy of the genetic code, which allows different nucleic acid sequences to code for the same protein or peptide, is known in the literature. (U.S. Patent No.  
20 4,757,006, the entirety of which is herein incorporated by reference).

In an aspect of the present invention, one or more of the nucleic acid molecules of the present invention differ in nucleic acid sequence from those encoding a soybean protein or fragment thereof in SEQ ID NO: 1 through SEQ ID NO: 57264 due to the degeneracy in the genetic code in that they encode the same protein but differ in nucleic  
25 acid sequence.

In another further aspect of the present invention, one or more of the nucleic acid molecules of the present invention differ in nucleic acid sequence from those encoding a

soybean protein or fragment thereof in SEQ ID NO: 1 through SEQ ID NO: 57264 due to the fact that the different nucleic acid sequences encode a protein having one or more conservative amino acid residues.

It is understood that codons capable of coding for such conservative amino acid substitutions are known in the art.

It is well known in the art that one or more amino acids in a native sequence can be substituted with another amino acid(s), the charge and polarity of which are similar to that of the native amino acid, *i.e.*, a conservative amino acid substitution, resulting in a silent change. Conserved substitutes for an amino acid within the native polypeptide sequence can be selected from other members of the class to which the naturally occurring amino acid belongs. Amino acids can be divided into the following four groups: (1) acidic amino acids, (2) basic amino acids, (3) neutral polar amino acids, and (4) neutral nonpolar amino acids. Representative amino acids within these various groups include, but are not limited to, (1) acidic (negatively charged) amino acids such as aspartic acid and glutamic acid; (2) basic (positively charged) amino acids such as arginine, histidine, and lysine; (3) neutral polar amino acids such as glycine, serine, threonine, cysteine, cystine, tyrosine, asparagine, and glutamine; and (4) neutral nonpolar (hydrophobic) amino acids such as alanine, leucine, isoleucine, valine, proline, phenylalanine, tryptophan, and methionine.

Conservative amino acid changes within the native polypeptides sequence can be made by substituting one amino acid within one of these groups with another amino acid within the same group. Biologically functional equivalents of the proteins or fragments thereof of the present invention can have 10 or fewer conservative amino acid changes, more preferably seven or fewer conservative amino acid changes, and most preferably five or fewer conservative amino acid changes. The encoding nucleotide sequence will thus have corresponding base substitutions, permitting it to encode biologically functional equivalent forms of the proteins or fragments of the present invention.



It is understood that certain amino acids may be substituted for other amino acids in a protein structure without appreciable loss of interactive binding capacity with structures such as, for example, antigen-binding regions of antibodies or binding sites on substrate molecules. Because it is the interactive capacity and nature of a protein that defines that protein's biological functional activity, certain amino acid sequence substitutions can be made in a protein sequence and, of course, its underlying DNA coding sequence and, nevertheless, obtain a protein with like properties. It is thus contemplated by the inventors that various changes may be made in the peptide sequences of the proteins or fragments of the present invention, or corresponding DNA sequences that encode said peptides, without appreciable loss of their biological utility or activity. It is understood that codons capable of coding for such amino acid changes are known in the art.

In making such changes, the hydropathic index of amino acids may be considered. The importance of the hydropathic amino acid index in conferring interactive biological function on a protein is generally understood in the art (Kyte and Doolittle, *J. Mol. Biol.* 157, 105-132 (1982), herein incorporated by reference in its entirety). It is accepted that the relative hydropathic character of the amino acid contributes to the secondary structure of the resultant protein, which in turn defines the interaction of the protein with other molecules, for example, enzymes, substrates, receptors, DNA, antibodies, antigens, and the like.

Each amino acid has been assigned a hydropathic index on the basis of its hydrophobicity and charge characteristics (Kyte and Doolittle, 1982); these are isoleucine (+4.5), valine (+4.2), leucine (+3.8), phenylalanine (+2.8), cysteine/cystine (+2.5), methionine (+1.9), alanine (+1.8), glycine (-0.4), threonine (-0.7), serine (-0.8), tryptophan (-0.9), tyrosine (-1.3), proline (-1.6), histidine (-3.2), glutamate (-3.5), glutamine (-3.5), aspartate (-3.5), asparagine (-3.5), lysine (-3.9), and arginine (-4.5).

In making such changes, the substitution of amino acids whose hydropathic indices are within  $\pm 2$  is preferred, those which are within  $\pm 1$  are particularly preferred, and those within  $\pm 0.5$  are even more particularly preferred.

It is also understood in the art that the substitution of like amino acids can be  
 5 made effectively on the basis of hydrophilicity. U.S. Patent 4,554,101, incorporated herein by reference in its entirety, states that the greatest local average hydrophilicity of a protein, as govern by the hydrophilicity of its adjacent amino acids, correlates with a biological property of the protein.

As detailed in U.S. Patent 4,554,101, the following hydrophilicity values have been  
 10 assigned to amino acid residues: arginine (+3.0), lysine (+3.0), aspartate (+3.0 $\pm$ 1), glutamate (+3.0 $\pm$ 1), serine (+0.3), asparagine (+0.2), glutamine (+0.2), glycine (0), threonine (-0.4), proline (-0.5 $\pm$ 1), alanine (-0.5), histidine (-0.5), cysteine (-1.0), methionine (-1.3), valine (-1.5), leucine (-1.8), isoleucine (-1.8), tyrosine (-2.3), phenylalanine (-2.5), and tryptophan (-3.4). In making such changes, the substitution of  
 15 amino acids whose hydrophilicity values are within  $\pm 2$  is preferred, those which are within  $\pm 1$  are particularly preferred, and those within  $\pm 0.5$  are even more particularly preferred.

In a further aspect of the present invention, one or more of the nucleic acid molecules of the present invention differ in nucleic acid sequence from those encoding a  
 20 protein or fragment thereof set forth in SEQ ID NO: 1 through SEQ ID NO: 57264 or fragment thereof due to the fact that one or more codons encoding an amino acid has been substituted for a codon that encodes a nonessential substitution of the amino acid originally encoded.

One aspect of the present invention concerns markers that include nucleic acid  
 25 molecules SEQ ID NO: 1 through SEQ ID NO: 57264 or complements thereof or fragments of either that can act as markers or other nucleic acid molecules of the present invention that can act as markers. Genetic markers of the present invention include

“dominant” or “codominant” markers “Codominant markers” reveal the presence of two or more alleles (two per diploid individual) at a locus. “Dominant markers” reveal the presence of only a single allele per locus. The presence of the dominant marker phenotype (e.g., a band of DNA) is an indication that one allele is present in either the homozygous or heterozygous condition. The absence of the dominant marker phenotype (e.g. absence of a DNA band) is merely evidence that “some other” undefined allele is present. In the case of populations where individuals are predominantly homozygous and loci are predominately dimorphic, dominant and codominant markers can be equally valuable. As populations become more heterozygous and multi-allelic, codominant markers often become more informative of the genotype than dominant markers. Marker molecules can be, for example, capable of detecting polymorphisms such as single nucleotide polymorphisms (SNPs).

SNPs are single base changes in genomic DNA sequence. They occur at greater frequency and are spaced with a greater uniformity throughout a genome than other reported forms of polymorphism. The greater frequency and uniformity of SNPs means that there is greater probability that such a polymorphism will be found near or in a genetic locus of interest than would be the case for other polymorphisms. SNPs are located in protein-coding regions and noncoding regions of a genome. Some of these SNPs may result in defective or variant protein expression (e.g., as a results of mutations or defective splicing). Analysis (genotyping) of characterized SNPs can require only a plus/minus assay rather than a lengthy measurement, permitting easier automation.

SNPs can be characterized using any of a variety of methods. Such methods include the direct or indirect sequencing of the site, the use of restriction enzymes (Botstein *et al.*, *Am. J. Hum. Genet.* 32:314-331 (1980), the entirety of which is herein incorporated reference; Konieczny and Ausubel, *Plant J.* 4:403-410 (1993), the entirety of which is herein incorporated by reference), enzymatic and chemical mismatch assays (Myers *et al.*, *Nature* 313:495-498 (1985), the entirety of which is herein incorporated by

reference), allele-specific PCR (Newton *et al.*, *Nucl. Acids Res.* 17:2503-2516 (1989), the entirety of which is herein incorporated by reference; Wu *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86:2757-2760 (1989), the entirety of which is herein incorporated by reference), ligase chain reaction (Barany, *Proc. Natl. Acad. Sci. (U.S.A.)* 88:189-193 (1991), the entirety of which is herein incorporated by reference), single-strand conformation polymorphism analysis (Labrune *et al.*, *Am. J. Hum. Genet.* 48: 1115-1120 (1991), the entirety of which is herein incorporated by reference), primer-directed nucleotide incorporation assays (Kuppuswami *et al.*, *Proc. Natl. Acad. Sci. USA* 88:1143-1147 (1991), the entirety of which is herein incorporated by reference), dideoxy fingerprinting (Sarkar *et al.*, *Genomics* 13:441-443 (1992), the entirety of which is herein incorporated by reference), solid-phase ELISA-based oligonucleotide ligation assays (Nikiforov *et al.*, *Nucl. Acids Res.* 22:4167-4175 (1994), the entirety of which is herein incorporated by reference), oligonucleotide fluorescence-quenching assays (Livak *et al.*, *PCR Methods Appl.* 4:357-362 (1995), the entirety of which is herein incorporated by reference), 5'-nuclease allele-specific hybridization TaqMan assay (Livak *et al.*, *Nature Genet.* 9:341-342 (1995), the entirety of which is herein incorporated by reference), template-directed dye-terminator incorporation (TDI) assay (Chen and Kwok, *Nucl. Acids Res.* 25:347-353 (1997), the entirety of which is herein incorporated by reference), allele-specific molecular beacon assay (Tyagi *et al.*, *Nature Biotech.* 16: 49-53 (1998), the entirety of which is herein incorporated by reference), PinPoint assay (Haff and Smirnov, *Genome Res.* 7: 378-388 (1997), the entirety of which is herein incorporated by reference) and dCAPS analysis (Neff *et al.*, *Plant J.* 14:387-392 (1998), the entirety of which is herein incorporated by reference).

Additional markers, such as AFLP markers, RFLP markers and RAPD markers, can be utilized (Walton, *Seed World* 22-29 (July, 1993), the entirety of which is herein incorporated by reference; Burow and Blake, *Molecular Dissection of Complex Traits*, 13-29, Paterson (ed.), CRC Press, New York (1988), the entirety of which is herein

incorporated by reference). DNA markers can be developed from nucleic acid molecules using restriction endonucleases, the PCR and/or DNA sequence information. RFLP markers result from single base changes or insertions/deletions. These codominant markers are highly abundant in plant genomes, have a medium level of polymorphism and are developed by a combination of restriction endonuclease digestion and Southern blotting hybridization. CAPS are similarly developed from restriction nuclease digestion but only of specific PCR products. These markers are also codominant, have a medium level of polymorphism and are highly abundant in the genome. The CAPS result from single base changes and insertions/deletions.

Another marker type, RAPDs, are developed from DNA amplification with random primers and result from single base changes and insertions/deletions in plant genomes. They are dominant markers with a medium level of polymorphisms and are highly abundant. AFLP markers require using the PCR on a subset of restriction fragments from extended adapter primers. These markers are both dominant and codominant are highly abundant in genomes and exhibit a medium level of polymorphism.

SSRs require DNA sequence information. These codominant markers result from repeat length changes, are highly polymorphic and do not exhibit as high a degree of abundance in the genome as CAPS, AFLPs and RAPDs, SNPs also require DNA sequence information. These codominant markers result from single base substitutions. They are highly abundant and exhibit a medium of polymorphism (Rafalski *et al.*, In: *Nonmammalian Genomic Analysis*, Birren and Lai (ed.), Academic Press, San Diego, CA, pp. 75-134 (1996), the entirety of which is herein incorporated by reference). It is understood that a nucleic acid molecule of the present invention may be used as a marker.

A PCR probe is a nucleic acid molecule capable of initiating a polymerase activity while in a double-stranded structure with another nucleic acid. Various methods for determining the structure of PCR probes and PCR techniques exist in the art. Computer

generated searches using programs such as Primer3 ([www-genome.wi.mit.edu/cgi-bin/primer/primer3.cgi](http://www-genome.wi.mit.edu/cgi-bin/primer/primer3.cgi)), STSPipeline ([www-genome.wi.mit.edu/cgi-bin/www-STSPipeline](http://www-genome.wi.mit.edu/cgi-bin/www-STSPipeline)), or GeneUp (Pesole *et al.*, *BioTechniques* 25:112-123 (1998) the entirety of which is herein incorporated by reference), for example, can be used to identify potential PCR primers.

It is understood that a fragment of one or more of the nucleic acid molecules of the present invention may be a probe and specifically a PCR probe.

**(b) Protein and Peptide Molecules**

A class of agents comprises one or more of the protein or peptide molecules encoded by SEQ ID NO: 1 through SEQ ID NO:57264 or one or more of the protein or fragment thereof or peptide molecules encoded by other nucleic acid agents of the present invention. As used herein, the term "protein molecule" or "peptide molecule" includes any molecule that comprises five or more amino acids. It is well known in the art that proteins may undergo modification, including post-translational modifications, such as, but not limited to, disulfide bond formation, glycosylation, phosphorylation, or oligomerization. Thus, as used herein, the term "protein molecule" or "peptide molecule" includes any protein molecule that is modified by any biological or non-biological process. The terms "amino acid" and "amino acids" refer to all naturally occurring L-amino acids. This definition is meant to include norleucine, ornithine, homocysteine, and homoserine.

One or more of the protein or fragment of peptide molecules may be produced via chemical synthesis, or more preferably, by expression in a suitable bacterial or eukaryotic host. Suitable methods for expression are described by Sambrook, *et al.*, (In: *Molecular Cloning, A Laboratory Manual, 2nd Edition, Cold Spring Harbor Press, Cold Spring Harbor, New York* (1989)), or similar texts.

A "protein fragment" is a peptide or polypeptide molecule whose amino acid sequence comprises a subset of the amino acid sequence of that protein. A protein or

fragment thereof that comprises one or more additional peptide regions not derived from that protein is a "fusion" protein. Such molecules may be derivatized to contain carbohydrate or other moieties (such as keyhole limpet hemocyanin, etc.). Fusion protein or peptide molecule of the present invention are preferably produced via recombinant means.

Another class of agents comprise protein or peptide molecules encoded by SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof or, fragments or fusions thereof in which non-essential, or not relevant, amino acid residues have been added, replaced, or deleted. An example of such a homologue is the homologue protein of all non-maize plant species, including but not limited to alfalfa, *Arabidopsis*, barley, *Brassica*, broccoli, cabbage, citrus, cotton, garlic, oat, oilseed rape, onion, canola, flax, an ornamental plant, pea, peanut, pepper, potato, rice, rye, sorghum, soybean, strawberry, sugarcane, sugarbeet, tomato, wheat, poplar, pine, fir, eukalyptus, apple, lettuce, peas, lentils, grape, banana, tea, turf grasses, etc. Particularly preferred non-maize plants to utilize for the isolation of homologues would include alfalfa, *Arabidopsis*, barley, cotton, oat, oilseed rape, rice, canola, ornamentals, soybean, sugarcane, sugarbeet, tomato, potato, wheat, and turf grasses. Such a homologue can be obtained by any of a variety of methods. Most preferably, as indicated above, one or more of the disclosed sequences (SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof) will be used to define a pair of primers that may be used to isolate the homologue-encoding nucleic acid molecules from any desired species. Such molecules can be expressed to yield homologues by recombinant means.

### (c) Antibodies

One aspect of the present invention concerns antibodies, single-chain antigen binding molecules, or other proteins that specifically bind to one or more of the protein or peptide molecules of the present invention and their homologues, fusions or fragments. Such antibodies may be used to quantitatively or qualitatively detect the protein or

peptide molecules of the present invention. As used herein, an antibody or peptide is said to “specifically bind” to a protein or peptide molecule of the present invention if such binding is not competitively inhibited by the presence of non-related molecules.

Nucleic acid molecules that encode all or part of the protein of the present invention can be expressed, via recombinant means, to yield protein or peptides that can in turn be used to elicit antibodies that are capable of binding the expressed protein or peptide. Such antibodies may be used in immunoassays for that protein. Such protein-encoding molecules, or their fragments may be a “fusion” molecule (i.e., a part of a larger nucleic acid molecule) such that, upon expression, a fusion protein is produced. It is understood that any of the nucleic acid molecules of the present invention may be expressed, via recombinant means, to yield proteins or peptides encoded by these nucleic acid molecules.

The antibodies that specifically bind proteins and protein fragments of the present invention may be polyclonal or monoclonal, and may comprise intact immunoglobulins, or antigen binding portions of immunoglobulins (such as  $F(ab')$ ,  $F(ab')_2$ ) fragments, or single-chain immunoglobulins producible, for example, via recombinant means). It is understood that practitioners are familiar with the standard resource materials which describe specific conditions and procedures for the construction, manipulation and isolation of antibodies (see, for example, Harlow and Lane, In *Antibodies: A Laboratory Manual*, Cold Spring Harbor Press, Cold Spring Harbor, New York (1988), the entirety of which is herein incorporated by reference).

Murine monoclonal antibodies are particularly preferred. BALB/c mice are preferred for this purpose, however, equivalent strains may also be used. The animals are preferably immunized with approximately 25  $\mu$ g of purified protein (or fragment thereof) that has been emulsified a suitable adjuvant (such as TiterMax adjuvant (Vaxcel, Norcross, GA)). Immunization is preferably conducted at two intramuscular sites, one intraperitoneal site, and one subcutaneous site at the base of the tail. An additional i.v.



injection of approximately 25  $\mu$ g of antigen is preferably given in normal saline three weeks later. After approximately 11 days following the second injection, the mice may be bled and the blood screened for the presence of anti-protein or peptide antibodies. Preferably, a direct binding Enzyme-Linked Immunoassay (ELISA) is employed for this purpose.

More preferably, the mouse having the highest antibody titer is given a third i.v. injection of approximately 25  $\mu$ g of the same protein or fragment. The splenic leukocytes from this animal may be recovered 3 days later, and are then permitted to fuse, most preferably, using polyethylene glycol, with cells of a suitable myeloma cell line (such as, for example, the P3X63Ag8.653 myeloma cell line). Hybridoma cells are selected by culturing the cells under "HAT" (hypoxanthine-aminopterin-thymine) selection for about one week. The resulting clones may then be screened for their capacity to produce monoclonal antibodies ("mAbs), preferably by direct ELISA.

In one embodiment, anti-protein or peptide monoclonal antibodies are isolated using a fusion of a protein, protein fragment, or peptide of the present invention, or conjugate of a protein, protein fragment, or peptide of the present invention, as immunogens. Thus, for example, a group of mice can be immunized using a fusion protein emulsified in Freund's complete adjuvant (e.g. approximately 50  $\mu$ g of antigen per immunization). At three week intervals, an identical amount of antigen is emulsified in Freund's incomplete adjuvant and used to immunize the animals. Ten days following the third immunization, serum samples are taken and evaluated for the presence of antibody. If antibody titers are too low, a fourth booster can be employed. Polysera capable of binding the protein or peptide can also be obtained using this method.

In a preferred procedure for obtaining monoclonal antibodies, the spleens of the above-described immunized mice are removed, disrupted, and immune splenocytes are isolated over a ficoll gradient. The isolated splenocytes are fused, using polyethylene glycol with BALB/c-derived HGPRT (hypoxanthine guanine phosphoribosyl transferase)

deficient P3x63xAg8.653 plasmacytoma cells. The fused cells are plated into 96-well microtiter plates and screened for hybridoma fusion cells by their capacity to grow in culture medium supplemented with hypoxanthine, aminopterin and thymidine for approximately 2-3 weeks.

- 5           Hybridoma cells that arise from such incubation are preferably screened for their capacity to produce an immunoglobulin that binds to a protein of interest. An indirect ELISA may be used for this purpose. In brief, the supernatants of hybridomas are incubated in microtiter wells that contain immobilized protein. After washing, the titer of bound immunoglobulin can be determined using, for example, a goat anti-mouse
- 10   antibody conjugated to horseradish peroxidase. After additional washing, the amount of immobilized enzyme is determined (for example through the use of a chromogenic substrate). Such screening is performed as quickly as possible after the identification of the hybridoma in order to ensure that a desired clone is not overgrown by non-secreting neighbors. Desirably, the fusion plates are screened several times since the rates of
- 15   hybridoma growth vary. In a preferred sub-embodiment, a different antigenic form of immunogen may be used to screen the hybridoma. Thus, for example, the splenocytes may be immunized with one immunogen, but the resulting hybridomas can be screened using a different immunogen. It is understood that any of the protein or peptide molecules of the present invention may be used to raise antibodies.

- 20           As discussed below, such antibody molecules or their fragments may be used for diagnostic purposes. Where the antibodies are intended for diagnostic purposes, it may be desirable to derivatize them, for example with a ligand group (such as biotin) or a detectable marker group (such as a fluorescent group, a radioisotope or an enzyme).

- 25           The ability to produce antibodies that bind the protein or peptide molecules of the present invention permits the identification of mimetic compounds of those molecules. A "mimetic compound" is a compound that is not that compound, or a fragment of that

compound, but which nonetheless exhibits an ability to specifically bind to antibodies directed against that compound.

It is understood that any of the agents of the present invention can be substantially purified and/or be biologically active and/or recombinant.

## 5           **Uses of the Agents of the Invention**

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB143, prepared from *Zea mays* heat shocked seedlings two days post germination. Seedlings are a developmental phase in the growth process therefore, the ESTs of the present invention will find great use in the isolation of  
10 a variety of agronomically significant genes, including but not limited to genes that regulate germination, developmental stress, protein, amino acids, sterols, oils, minerals, isoflavones, saponins, trypsin inhibitors, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism, and seedling and vegetative regulatory elements. Such crucial genes are associated with plant growth, quality, yield, and could also serve as  
15 links in important metabolic, developmental and catabolic pathways.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB148, prepared from *Zea mays*, genotype DK604 mature pollen. ESTs from this tissue sample can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of  
20 commercially important traits. The ESTs of the present invention can enable the acquisition of, including but not limited to genes involved in reproduction and seed production, therefore, the ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to, genes that regulate meiosis, cell division, carotenoids, floral biogenesis, embryogenesis, protein,  
25 amino acids, sterols, oils, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements.

Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB189, prepared from *Zea mays* pooled leaf tissue harvested from field grown plants. Leaves are the carbohydrate factories of crop plants, therefore, the ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to genes that are necessary to for the interception and transformation of light energy via photosynthesis linked with plant growth, quality and yield. Genes isolated using the disclosed ESTs would also be in pathways including but not limited to a pathway such as nitrogen metabolism linked to fruiting and mobilization and distribution of nitrogen.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3059, prepared from *Zea mays*, genotype RX601, kernel tissue harvested 15-20 days after pollination from field grown plants. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention can enable the acquisition of, including but not limited to genes that regulate protein, oils, amino acids, sterols, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3060, prepared from the tissue of *Zea mays* senescing leaves, which are collected at the position of two leaves below the ear leaf of mature corn plants at 40 days after pollination. The ESTs of the present invention can enable the acquisition of genes expressed during onset and early stages of leaf senescence. The ESTs of the present invention can also be used in isolating genes which

would be involved in pathways, including but not limited to, of light and dark respiration, of CO<sub>2</sub> assimilation, and of nitrogen metabolism linked to fruiting and mobilization and distribution of nitrogen. Leaves are the main photosynthetic organs of crop plants, therefore, the ESTs of the present invention will find great use in the isolation of a variety

5 of agronomically significant genes, including but not limited to, genes that regulate photosynthesis and respiration. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of

10 commercially important traits.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3062, prepared from *Zea mays* genotype H99 husk tissue harvested at the eight week old stage from plants grown in a green house. Husks have similar characteristics of leaves which are the carbohydrate factories of crop plants,

15 therefore, the ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to genes that are necessary to for the interception and transformation of light energy via photosynthesis linked with plant growth, quality and yield. Genes isolated using the disclosed ESTs would also be in pathways including but not limited to a pathway such as nitrogen metabolism linked to

20 fruiting and mobilization and distribution of nitrogen.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3066, prepared from *Zea mays*, genotype H99 (Monsanto Corp. St. Louis, MO), immature anthers. The ESTs of the present invention can enable the acquisition of, but are not limited to genes involved in reproduction, pollen

25 production and development, and seed production, therefore, the ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to, genes that regulate microsporogenesis, meiosis, cell

division, carotenoids, floral biogenesis, embryogenesis, protein, amino acids, sterols, oils, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3067, prepared from *Zea mays*, genotype M017, kernel tissue harvested 5-8 days after pollination from plants grown in a green house. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention can enable the acquisition of, including but not limited to genes that regulate protein, early kernel development, cell division, amyloplast biogenesis, early carbon flow across material to filial tissue, oils, amino acids, sterols, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3068, prepared from *Zea mays*, genotype MO17 pollen germinating on H99 silk tissue. This sample represents genes expressed in both pollen and silk tissues earlier in pollination and can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention can enable the acquisition of, including but not limited to genes involved in reproduction and seed production, therefore, the ESTs of the present invention will find great use in the isolation

of a variety of agronomically significant genes, including but not limited to, genes that regulate meiosis, cell division, carotenoids, floral biogenesis, embryogenesis, protein, amino acids, sterols, oils, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements.

- 5 Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3069, prepared from *Zea mays*, genotype H99 (Monsanto Corp., St. Louis, MO), ears pollinated with an excess of genotype MO17 (Illinois Foundation Seeds, Champaign, IL) pollen and harvested from 18 hours after pollination plants. The ESTs of the present invention can enable the acquisition of, including but not limited to genes expressed early in fertilization and those involved in reproduction and seed development, therefore, the ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to, genes that regulate cell division, floral biogenesis, embryogenesis, protein, oils, amino acids, sterols, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3075, prepared from maize, genotype H99, microspore tissue. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention can enable the acquisition of, but are not limited to genes involved in reproduction, meiosis, and cell

division. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3076, prepared from *Zea mays* kernels from  
 5 immature ear tissue harvested from seven week old plants grown in a green house. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention can enable the acquisition of, including but not limited to genes that regulate protein, oils, amino acids, sterols, minerals, isoflavones,  
 10 saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways.

The nucleic acid molecules and fragments thereof of the present invention are  
 15 generated from the cDNA library, LIB3078, prepared from *Zea mays*, genotype RX601 (Asgrow, Des Moines, IA), shoots harvested at 10 days after planting from plants which are grown in a greenhouse in a high CO<sub>2</sub> environment (~1000 ppm CO<sub>2</sub>). The ESTs of the present invention can enable the acquisition of, but are not limited to genes involved in photosynthesis and respiration, therefore, the ESTs of the present invention will find  
 20 great use in the isolation of a variety of agronomically significant genes, including but not limited to, genes that regulate light and dark respiration, CO<sub>2</sub> assimilation, photosynthesis, developmental stress, proteins, oils, amino acids, sterols, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, and starch metabolism. Such genes are associated with plant growth, quality and yield, and  
 25 could also serve as links in important developmental, metabolic, and catabolic pathways. Libraries from this tissue can enable the acquisition of a variety of agronomically



significant genes involved in the synthesis and catabolism of commercially important traits.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3079, prepared from *Zea mays* dissected kernel

5 tissue including the lower endosperm and the basal endosperm transfer region. This tissue was harvested from plants beyond the V10 stage grown under greenhouse conditions. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention can enable the  
10 acquisition of, including but not limited to genes that regulate protein, oils, amino acids, sterols, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways.

15 The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3088, prepared from *Zea mays* kernels from immature ear tissue harvested from eight week old plants grown in a green house. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important  
20 traits. The ESTs of the present invention can enable the acquisition of, including but not limited to genes that regulate protein, oils, amino acids, sterols, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic,  
25 and catabolic pathways.

Nucleic acid molecules and fragments thereof of the present invention may be employed to obtain other nucleic acid molecules. Such molecules include the nucleic acid molecules of other plants or other organisms (*e.g.*, alfalfa, rice, potato, cotton, oat, rye, barley, maize, wheat, *Arabidopsis*, *Brassica*, etc.) including the nucleic acid

5 molecules that encode, in whole or in part, protein homologues of other plant species or other organisms, and sequences of genetic elements such as promoters and transcriptional regulatory elements. Such molecules can be readily obtained by using the above-described nucleic acid molecules or fragments thereof to screen cDNA or genomic libraries obtained from such plant species. Methods for forming such libraries are well

10 known in the art. Such homologue molecules may differ in their nucleotide sequences from those found in one or more of SEQ ID NO:1 through SEQ ID NO:57264 or complements thereof because complete complementarity is not needed for stable hybridization. The nucleic acid molecules of the present invention therefore also include molecules that, although capable of specifically hybridizing with the nucleic acid

15 molecules may lack "complete complementarity."

Any of a variety of methods may be used to obtain one or more of the above-described nucleic acid molecules (Zamechik *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 83:4143-4146 (1986), the entirety of which is herein incorporated by reference; Goodchild *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 85:5507-5511 (1988), the entirety of

20 which is herein incorporated by reference; Wickstrom *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 85:1028-1032 (1988), the entirety of which is herein incorporated by reference; Holt, *et al.*, *Molec. Cell. Biol.* 8:963-973 (1988), the entirety of which is herein incorporated by reference; Gerwitz, *et al.*, *Science* 242:1303-1306 (1988), the entirety of which is herein incorporated by reference; Anfossi, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)*

25 86:3379-3383 (1989), the entirety of which is herein incorporated by reference; Becker, *et al.*, *EMBO J.* 8:3685-3691 (1989); the entirety of which is herein incorporated by reference). Automated nucleic acid synthesizers may be employed for this purpose. In

lieu of such synthesis, the disclosed nucleic acid molecules may be used to define a pair of primers that can be used with the polymerase chain reaction (Mullis, *et al.*, *Cold Spring Harbor Symp. Quant. Biol.* 51:263-273 (1986); Erlich *et al.*, EP 50,424; EP 84,796, EP 258,017, EP 237,362; Mullis, EP 201,184; Mullis *et al.*, US 4,683,202;

5 Erlich, US 4,582,788; and Saiki, R. *et al.*, US 4,683,194, all of which are hereby incorporated by reference in their entirety) to amplify and obtain any desired nucleic acid molecule or fragment.

Promoter sequence(s) and other genetic elements including but not limited to transcriptional regulatory elements associated with one or more of the disclosed nucleic acid sequences can also be obtained using the disclosed nucleic acid sequences provided  
10 herein.

In one embodiment, such sequences are obtained by incubating EST nucleic acid molecules or preferably fragments thereof with members of genomic libraries (*e.g.* maize and soybean) and recovering clones that hybridize to the EST nucleic acid molecule or  
15 fragment thereof. In a second embodiment, methods of "chromosome walking," or inverse PCR may be used to obtain such sequences (Frohman, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 85:8998-9002 (1988); Ohara, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86: 5673-5677 (1989); Pang *et al.*, *Biotechniques*, 22(6); 1046-1048 (1977); Huang *et al.*, *Methods Mol. Biol.* 69: 89-96 (1977); Hartl *et al.*, *Methods Mol. Biol.* 58: 293-301  
20 (1996), all of which are hereby incorporated by reference in their entirety). In one embodiment, the disclosed nucleic acid molecules are used to identify cDNAs whose analogous genes contain promoters with desirable expression patterns. The nucleic acid molecules isolated from the library of the present invention are used to isolate promoters of tissue-enhanced, tissue-specific, developmentally- or environmentally-regulated  
25 expression profiles. Isolation and functional analysis of the 5' flanking promoter sequences of these genes from genomic libraries, for example, using genomic screening methods and PCR techniques would result in the isolation of useful promoters and

transcriptional regulatory elements. These methods are known to those of skill in the art and have been described (See for example Birren *et al.*, *Genome Analysis: Analyzing DNA*, 1, (1997), Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., the entirety of which is herein incorporated by reference).

5 Promoters obtained utilizing the nucleic acid molecules of the present invention could also be modified to affect their control characteristics. Examples of such modifications would include but are not limited to enhancer sequences as reported by Kay *et al.*, *Science* 236:1299 (1987), herein incorporated by reference in its entirety. Such genetic elements could be used to enhance gene expression of new and existing

10 traits for crop improvements.

The nucleic acid molecules of the present invention may be used to isolate promoters of tissue enhanced. tissue specific, cell-specific, cell -type, developmentally or environmentally regulated expression profiles. Isolation and functional analysis of the 5' flanking promoter sequences of these genes from genomic libraries, for example, using

15 genomic screening methods and PCR techniques would result in the isolation of useful promoters and transcriptional regulatory elements. These methods are known to those of skill in the art and have been described (See, for example, Birren *et al.*, *Genome Analysis: Analyzing DNA*, 1, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y. (1997), the entirety of which is herein incorporated by reference). Promoters

20 obtained utilizing the nucleic acid molecules of the present invention could also be modified to affect their control characteristics. Examples of such modifications would include but are not limited to enhancer sequences as reported by Kay, *et al Science* 236:1299 (1987), herein incorporated reference in its entirety. Such genetic elements could be used to enhance gene expression of new and existing traits for crop

25 improvements.

In an aspect of the present invention, one or more of the nucleic molecules of the present invention are used to determine whether a plant (preferably maize) has a mutation

affecting the level (i.e., the concentration of mRNA in a sample, etc.) or pattern (i.e., the kinetics of expression, rate of decomposition, stability profile, etc.) of the expression encoded in part or whole by one or more of the nucleic acid molecules of the present invention (collectively, the “Expression Response” of a cell or tissue). As used herein,

5 the Expression Response manifested by a cell or tissue is said to be “altered” if it differs from the Expression Response of cells or tissues of plants not exhibiting the phenotype.

To determine whether a Expression Response is altered, the Expression Response manifested by the cell or tissue of the plant exhibiting the phenotype is compared with that of a similar cell or tissue sample of a plant not exhibiting the phenotype. As will be

10 appreciated, it is not necessary to re-determine the Expression Response of the cell or tissue sample of plants not exhibiting the phenotype each time such a comparison is made; rather, the Expression Response of a particular plant may be compared with

previously obtained values of normal plants. As used herein, the phenotype of the organism is any of one or more characteristics of an organism (e.g. disease resistance,

15 pest tolerance, environmental tolerance, male sterility, yield, quality improvements, etc.).

A change in genotype or phenotype may be transient or permanent. Also as used herein, a tissue sample is any sample that comprises more than one cell. In a preferred aspect, a tissue sample comprises cells that share a common characteristic (e.g. derived from leaf, root, or pollen etc).

20 In one sub-aspect, such an analysis is conducted by determining the presence and/or identity of polymorphism(s) by one or more of the nucleic acid molecules of the present invention and more specifically, one or more of the EST nucleic acid molecules or fragments thereof which are associated with phenotype, or a predisposition to phenotype.

25 Any of a variety of molecules can be used to identify such polymorphism(s). In one embodiment, one or more of the EST nucleic acid molecules (or a sub-fragment thereof) may be employed as a marker nucleic acid molecule to identify such

polymorphism(s). Alternatively, such polymorphisms can be detected through the use of a marker nucleic acid molecule or a marker protein that is genetically linked to (i.e., a polynucleotide that co-segregates with) such polymorphism(s).

In an alternative embodiment, such polymorphisms can be detected through the use of a marker nucleic acid molecule that is physically linked to such polymorphism(s). For this purpose, marker nucleic acid molecules comprising a nucleotide sequence of a polynucleotide located within 1 mb of the polymorphism(s), and more preferably within 100 kb of the polymorphism(s), and most preferably within 10 kb of the polymorphism(s) can be employed.

The genomes of animals and plants naturally undergo spontaneous mutation in the course of their continuing evolution (Gusella, *Ann. Rev. Biochem.* 55:831-854 (1986)). A “polymorphism” is a variation or difference in the sequence of the gene or its flanking regions that arises in some of the members of a species. The variant sequence and the “original” sequence co-exist in the species’ population. In some instances, such co-existence is in stable or quasi-stable equilibrium.

A polymorphism is thus said to be “allelic,” in that, due to the existence of the polymorphism, some members of a species may have the original sequence (i.e., the original “allele”) whereas other members may have the variant sequence (i.e., the variant “allele”). In the simplest case, only one variant sequence may exist, and the polymorphism is thus said to be di-allelic. In other cases, the species’ population may contain multiple alleles, and the polymorphism is termed tri-allelic, etc. A single gene may have multiple different unrelated polymorphisms. For example, it may have a di-allelic polymorphism at one site, and a multi-allelic polymorphism at another site.

The variation that defines the polymorphism may range from a single nucleotide variation to the insertion or deletion of extended regions within a gene. In some cases, the DNA sequence variations are in regions of the genome that are characterized by short tandem repeats (STRs) that include tandem di- or tri-nucleotide repeated motifs of

nucleotides. Polymorphisms characterized by such tandem repeats are referred to as "variable number tandem repeat" ("VNTR") polymorphisms. VNTRs have been used in identity analysis (Weber, U.S. Patent 5,075,217; Armour, *et al.*, *FEBS Lett.* 307:113-115 (1992); Jones, *et al.*, *Eur. J. Haematol.* 39:144-147 (1987); Horn, *et al.*, PCT Application WO91/14003; Jeffreys, European Patent Application 370,719; Jeffreys, U.S. Patent 5,699,082; Jeffreys, *et al.*, *Amer. J. Hum. Genet.* 39:11-24 (1986); Jeffreys, *et al.*, *Nature* 316:76-79 (1985); Gray, *et al.*, *Proc. R. Acad. Soc. Lond.* 243:241-253 (1991); Moore, *et al.*, *Genomics* 10:654-660 (1991); Jeffreys, *et al.*, *Anim. Genet.* 18:1-15 (1987); Hillel, *et al.*, *Anim. Genet.* 20:145-155 (1989); Hillel, *et al.*, *Genet.* 124:783-789 (1990), all of which are herein incorporated by reference in their entirety).

The detection of polymorphic sites in a sample of DNA may be facilitated through the use of nucleic acid amplification methods. Such methods specifically increase the concentration of polynucleotides that span the polymorphic site, or include that site and sequences located either distal or proximal to it. Such amplified molecules can be readily detected by gel electrophoresis or other means.

The most preferred method of achieving such amplification employs the polymerase chain reaction ("PCR") (Mullis, *et al.*, *Cold Spring Harbor Symp. Quant. Biol.* 51:263-273 (1986); Erlich, *et al.*, European Patent Appln. 50,424; European Patent Appln. 84,796, European Patent Application 258,017, European Patent Appln. 237,362; Mullis, European Patent Appln. 201,184; Mullis, *et al.*, U.S. Patent No. 4,683,202; Erlich, U.S. Patent No. 4,582,788; and Saiki, *et al.*, U.S. Patent No. 4,683,194, all of which are herein incorporated by reference), using primer pairs that are capable of hybridizing to the proximal sequences that define a polymorphism in its double-stranded form.

In lieu of PCR, alternative methods, such as the "Ligase Chain Reaction" ("LCR") may be used (Barany, *Proc. Natl. Acad. Sci. (U.S.A.)* 88:189-193 (1991), the entirety of which is herein incorporated by reference). LCR uses two pairs of oligonucleotide probes

to exponentially amplify a specific target. The sequences of each pair of oligonucleotides is selected to permit the pair to hybridize to abutting sequences of the same strand of the target. Such hybridization forms a substrate for a template-dependent ligase. As with PCR, the resulting products thus serve as a template in subsequent cycles and an

5 exponential amplification of the desired sequence is obtained.

LCR can be performed with oligonucleotides having the proximal and distal sequences of the same strand of a polymorphic site. In one embodiment, either oligonucleotide will be designed to include the actual polymorphic site of the polymorphism. In such an embodiment, the reaction conditions are selected such that the

10 oligonucleotides can be ligated together only if the target molecule either contains or lacks the specific nucleotide that is complementary to the polymorphic site present on the oligonucleotide. Alternatively, the oligonucleotides may be selected such that they do not include the polymorphic site (see, Segev, PCT Application WO 90/01069, the entirety of which is herein incorporated by reference).

15 The "Oligonucleotide Ligation Assay" ("OLA") may alternatively be employed (Landegren, *et al.*, *Science* 241:1077-1080 (1988), the entirety of which is herein incorporated by reference). The OLA protocol uses two oligonucleotides which are designed to be capable of hybridizing to abutting sequences of a single strand of a target. OLA, like LCR, is particularly suited for the detection of point mutations. Unlike LCR,

20 however, OLA results in "linear" rather than exponential amplification of the target sequence.

Nickerson, *et al.* have described a nucleic acid detection assay that combines attributes of PCR and OLA (Nickerson, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 87:8923-8927 (1990), the entirety of which is herein incorporated by reference). In this method,

25 PCR is used to achieve the exponential amplification of target DNA, which is then detected using OLA. In addition to requiring multiple, and separate, processing steps,



one problem associated with such combinations is that they inherit all of the problems associated with PCR and OLA.

Schemes based on ligation of two (or more) oligonucleotides in the presence of nucleic acid having the sequence of the resulting "di-oligonucleotide", thereby amplifying  
 5 the di-oligonucleotide, are also known (Wu, *et al.*, *Genomics* 4:560 (1989), the entirety of which is herein incorporated by reference), and may be readily adapted to the purposes of the present invention.

Other known nucleic acid amplification procedures, such as allele-specific oligomers, branched DNA technology, transcription-based amplification systems, or  
 10 isothermal amplification methods may also be used to amplify and analyze such polymorphisms (Malek, *et al.*, U.S. Patent 5,130,238; Davey, *et al.*, European Patent Application 329,822; Schuster *et al.*, U.S. Patent 5,169,766; Miller, *et al.*, PCT Application WO 89/06700; Kwoh, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86:1173-1177 (1989); Gingeras, *et al.*, PCT Application WO 88/10315; Walker, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 89:392-396 (1992), all of which are herein incorporated by reference in their  
 15 entirety).

The identification of a polymorphism can be determined in a variety of ways. By correlating the presence or absence of it in a plant with the presence or absence of a phenotype, it is possible to predict the phenotype of that plant. If a polymorphism creates  
 20 or destroys a restriction endonuclease cleavage site, or if it results in the loss or insertion of DNA (e.g., a VNTR polymorphism), it will alter the size or profile of the DNA fragments that are generated by digestion with that restriction endonuclease. As such, individuals that possess a variant sequence can be distinguished from those having the original sequence by restriction fragment analysis. Polymorphisms that can be identified  
 25 in this manner are termed "restriction fragment length polymorphisms" ("RFLPs"). RFLPs have been widely used in human and plant genetic analyses (Glassberg, UK Patent Application 2135774; Skolnick, *et al.*, *Cytogen. Cell Genet.* 32:58-67 (1982);

Botstein, *et al.*, *Ann. J. Hum. Genet.* 32:314-331 (1980); Fischer, *et al.* (PCT Application WO90/13668); Uhlen, PCT Application WO90/11369).

Polymorphisms can also be identified by Single Strand Conformation

Polymorphism (SSCP) analysis. The SSCP technique is a method capable of identifying

5 most sequence variations in a single strand of DNA, typically between 150 and 250 nucleotides in length (Elles, *Methods in Molecular Medicine: Molecular Diagnosis of Genetic Diseases*, Humana Press (1996), the entirety of which is herein incorporated by reference); Orita *et al.*, *Genomics* 5: 874-879 (1989), the entirety of which is herein incorporated by reference). Under denaturing conditions a single strand of DNA will  
10 adopt a conformation that is uniquely dependent on its sequence conformation. This conformation usually will be different, even if only a single base is changed. Most conformations have been reported to alter the physical configuration or size sufficiently to be detectable by electrophoresis. A number of protocols have been described for SSCP including, but not limited to Lee *et al.*, *Anal. Biochem.* 205: 289-293 (1992), the entirety  
15 of which is herein incorporated by reference; Suzuki *et al.*, *Anal. Biochem.* 192: 82-84 (1991), the entirety of which is herein incorporated by reference; Lo *et al.*, *Nucleic Acids Research* 20: 1005-1009 (1992), the entirety of which is herein incorporated by reference; Sarkar *et al.*, *Genomics* 13: 441-443 (1992), the entirety of which is herein incorporated by reference). It is understood that one or more of the nucleic acids of the present  
20 invention, may be utilized as markers or probes to detect polymorphisms by SSCP analysis.

Polymorphisms may also be found using a DNA fingerprinting technique called amplified fragment length polymorphism (AFLP), which is based on the selective PCR amplification of restriction fragments from a total digest of genomic DNA to profile that  
25 DNA. Vos, *et al.*, *Nucleic Acids Res.* 23:4407-4414 (1995), the entirety of which is herein incorporated by reference. This method allows for the specific co-amplification of

high numbers of restriction fragments, which can be visualized by PCR without knowledge of the nucleic acid sequence.

AFLP employs basically three steps. Initially, a sample of genomic DNA is cut with restriction enzymes and oligonucleotide adapters are ligated to the restriction fragments of the DNA. The restriction fragments are then amplified using PCR by using the adapter and restriction sequence as target sites for primer annealing. The selective amplification is achieved by the use of primers that extend into the restriction fragments, amplifying only those fragments in which the primer extensions match the nucleotide flanking the restriction sites. These amplified fragments are then visualized on a denaturing polyacrylamide gel.

AFLP analysis has been performed on *Salix* (Beismann, *et al.*, *Mol. Ecol.* 6:989-993 (1997), the entirety of which is herein incorporated by reference); *Acinetobacter* (Janssen, *et al.*, *Int. J. Syst. Bacteriol* 47:1179-1187 (1997), the entirety of which is herein incorporated by reference), *Aeromonas popoffi* (Huys, *et al.*, *Int. J. Syst. Bacteriol.* 47:1165-1171 (1997), the entirety of which is herein incorporated by reference), rice (McCouch, *et al.*, *Plant Mol. Biol.* 35:89-99 (1997), the entirety of which is herein incorporated by reference); Nandi, *et al.*, *Mol. Gen. Genet.* 255:1-8 (1997); Cho, *et al.*, *Genome* 39:373-378 (1996), herein incorporated by reference), barley (*Hordeum vulgare*)(Simons, *et al.*, *Genomics* 44:61-70 (1997), the entirety of which is herein incorporated by reference; Waugh, *et al.*, *Mol. Gen. Genet.* 255:311-321 (1997), the entirety of which is herein incorporated by reference; Qi, *et al.*, *Mol. Gen Genet.* 254:330-336 (1997), the entirety of which is herein incorporated by reference; Becker, *et al.*, *Mol. Gen. Genet.* 249:65-73 (1995), the entirety of which is herein incorporated by reference), potato (Van der Voort, *et al.*, *Mol. Gen. Genet.* 255:438-447 (1997), the entirety of which is herein incorporated by reference; Meksem, *et al.*, *Mol. Gen. Genet.* 249:74-81 (1995), the entirety of which is herein incorporated by reference), *Phytophthora infestans* (Van der Lee, *et al.*, *Fungal Genet. Biol.* 21:278-291 (1997), the entirety of which is herein

incorporated by reference), *Bacillus anthracis* (Keim, *et al.*, *J. Bacteriol.* 179:818-824 (1997)), *Astragalus cremnophylax* (Travis, *et al.*, *Mol. Ecol.* 5:735-745 (1996), the entirety of which is herein incorporated by reference), *Arabidopsis* (Cnops, *et al.*, *Mol. Gen. Genet.* 253:32-41 (1996), the entirety of which is herein incorporated by reference), *Escherichia coli* (Lin, *et al.*, *Nucleic Acids Res.* 24:3649-3650 (1996), the entirety of which is herein incorporated by reference), *Aeromonas* (Huys, *et al.*, *Int. J. Syst. Bacteriol.* 46:572-580 (1996), the entirety of which is herein incorporated by reference), nematode (Folkertsma, *et al.*, *Mol. Plant Microbe Interact.* 9:47-54 (1996), the entirety of which is herein incorporated by reference), tomato (Thomas, *et al.*, *Plant J.* 8:785-794 (1995), the entirety of which is herein incorporated by reference), and human (Latorra, *et al.*, *PCR Methods Appl.* 3:351-358 (1994)). AFLP analysis has also been used for fingerprinting mRNA (Money, *et al.*, *Nucleic Acids Res.* 24:2616-2617 (1996), the entirety of which is herein incorporated by reference; Bachem, *et al.*, *Plant J.* 9:745-753 (1996), the entirety of which is herein incorporated by reference). It is understood that one or more of the nucleic acids of the present invention, may be utilized as markers or probes to detect polymorphisms by AFLP analysis for fingerprinting mRNA.

Polymorphisms may also be found using random amplified polymorphic DNA (RAPD) (Williams *et al.*, *Nucl. Acids Res.* 18: 6531-6535 (1990), the entirety of which is herein incorporated by reference) and cleaveable amplified polymorphic sequences (CAPS) (Lyamichev *et al.*, *Science* 260: 778-783 (1993), the entirety of which is herein incorporated by reference). It is understood that one or more of the nucleic acids of the present invention, may be utilized as markers or probes to detect polymorphisms by RAPD or CAPS analysis.

Polymorphisms are useful, through linkage analysis, to define the genetic distances or physical distances between polymorphic traits. A physical map or ordered array of genomic DNA fragments in the desired region containing the gene may be used to characterize and isolate genes corresponding to desirable traits. For this purpose, yeast

artificial chromosomes (YACs), bacterial artificial chromosomes (BACs), and cosmid  
are appropriate vectors for cloning large segments of DNA molecules. Although fewer  
clones are needed to make a contig for a specific genomic region by using YACs (Agyare  
*et al.*, *Genome Res.* 7: 1-9 (1997), the entirety of which is herein incorporated by  
5 reference; James *et al.*, *Genomics* 32: 425-430 (1996), the entirety of which is herein  
incorporated by reference), chimerism in the inserted DNA fragment can arise. Cosmids  
are convenient for handling smaller-size DNA molecules and may be used for  
transformation in developing transgenic plants. BACs also carry DNA fragments and are  
less prone to chimerism.

10 Through genetic mapping, a fine scale linkage map can be developed using DNA  
markers and, then, a genomic DNA library of large-sized fragments can be screened with  
molecular markers linked to the desired trait. Molecular markers are advantageous for  
agronomic traits that are otherwise difficult to tag, such as resistance to pathogens, insects  
and nematodes, tolerance to abiotic stress, quality parameters and quantitative traits such  
15 as high yield potential.

The essential requirements for marker-assisted selection in a plant breeding  
program are: (1) the marker(s) should co-segregate or be closely linked with the desired  
trait; (2) an efficient means of screening large populations for the molecular marker(s)  
should be available; and (3) the screening technique should have high reproducibility  
20 across laboratories and preferably be economical to use and be user-friendly.

The genetic linkage of marker molecules can be established by a gene mapping  
model such as, without limitation, the flanking marker model reported by Lander and  
Botstein, *Genetics* 121:185-199 (1989) and the interval mapping, based on maximum  
likelihood methods described by Lander and Botstein, *Genetics* 121:185-199 (1989) and  
25 implemented in the software package MAPMAKER/QTL (Lincoln and Lander, *Mapping  
Genes Controlling Quantitative Traits Using MAPMAKER/QTL*, Whitehead Institute for  
Biomedical Research, Massachusetts, (1990). Additional software includes Qgene,

Version 2.23 (1996), Department of Plant Breeding and Biometry, 266 Emerson Hall, Cornell University, Ithaca, NY, the manual of which is herein incorporated by reference in its entirety). Use of Qgene software is a particularly preferred approach.

A maximum likelihood estimate (MLE) for the presence of a marker is calculated, together with an MLE assuming no QTL effect, to avoid false positives. A  $\log_{10}$  of an odds ratio (LOD) is then calculated as:  $\text{LOD} = \log_{10}(\text{MLE for the presence of a QTL} / \text{MLE given no linked QTL})$ .

The LOD score essentially indicates how much more likely the data are to have arisen assuming the presence of a QTL than in its absence. The LOD threshold value for avoiding a false positive with a given confidence, say 95%, depends on the number of markers and the length of the genome. Graphs indicating LOD thresholds are set forth in Lander and Botstein, *Genetics* 121:185-199 (1989) the entirety of which is herein incorporated by reference and further described by Arús and Moreno-González, *Plant Breeding*, Hayward *et al.*, (eds.) Chapman & Hall, London, pp. 314-331 (1993), the entirety of which is herein incorporated by reference.

Additional models can be used. Many modifications and alternative approaches to interval mapping have been reported, including the use of non-parametric methods (Kruglyak and Lander, *Genetics* 139:1421-1428 (1995), the entirety of which is herein incorporated by reference). Multiple regression methods or models can be also be used, in which the trait is regressed on a large number of markers (Jansen, *Biometrics in Plant Breeding*, van Oijen and Jansen (eds.), Proceedings of the Ninth Meeting of the Eucarpia Section Biometrics in Plant Breeding, The Netherlands, pp. 116-124 (1994); Weber and Wricke, *Advances in Plant Breeding*, Blackwell, Berlin, 16 (1994), both of which is herein incorporated by reference in their entirety). Procedures combining interval mapping with regression analysis, whereby the phenotype is regressed onto a single putative QTL at a given marker interval and at the same time onto a number of markers that serve as 'cofactors,' have been reported by Jansen and Stam, *Genetics* 136:1447-1455

(1994), the entirety of which is herein incorporated by reference and Zeng, *Genetics* 136:1457-1468 (1994) the entirety of which is herein incorporated by reference.

Generally, the use of cofactors reduces the bias and sampling error of the estimated QTL positions (Utz and Melchinger, *Biometrics in Plant Breeding*, van Oijen and Jansen (eds.)

- 5 Proceedings of the Ninth Meeting of the Eucarpia Section Biometrics in Plant Breeding, The Netherlands, pp.195-204 (1994), the entirety of which is herein incorporated by reference, thereby improving the precision and efficiency of QTL mapping (Zeng, *Genetics* 136:1457-1468 (1994)). These models can be extended to multi-environment experiments to analyze genotype-environment interactions (Jansen *et al.*, *Theo. Appl. Genet.* 91:33-37 (1995), the entirety of which is herein incorporated by reference).

Selection of an appropriate mapping population is important to map construction. The choice of an appropriate mapping population depends on the type of marker systems employed (Tanksley *et al.*, *Molecular mapping plant chromosomes. Chromosome structure and function: Impact of new concepts*, Gustafson and Appels (eds.), Plenum

- 15 Press, New York, pp 157-173 (1988), the entirety of which is herein incorporated by reference). Consideration must be given to the source of parents (adapted vs. exotic) used in the mapping population. Chromosome pairing and recombination rates can be severely disturbed (suppressed) in wide crosses (adapted x exotic) and generally yield greatly reduced linkage distances. Wide crosses will usually provide segregating populations
- 20 with a relatively large array of polymorphisms when compared to progeny in a narrow cross (adapted x adapted).

- An  $F_2$  population is the first generation of selfing after the hybrid seed is produced. Usually a single  $F_1$  plant is selfed to generate a population segregating for all the genes in Mendelian (1:2:1) fashion. Maximum genetic information is obtained from a
- 25 completely classified  $F_2$  population using a codominant marker system (Mather, *Measurement of Linkage in Heredity*, Methuen and Co., (1938), the entirety of which is herein incorporated by reference). In the case of dominant markers, progeny tests (e.g.

$F_3$ ,  $BCF_2$ ) are required to identify the heterozygotes, thus making it equivalent to a completely classified  $F_2$  population. However, this procedure is often prohibitive because of the cost and time involved in progeny testing. Progeny testing of  $F_2$  individuals is often used in map construction where phenotypes do not consistently reflect genotype (e.g. disease resistance) or where trait expression is controlled by a QTL. Segregation data from progeny test populations (e.g.  $F_3$  or  $BCF_2$ ) can be used in map construction. Marker-assisted selection can then be applied to cross progeny based on marker-trait map associations ( $F_2$ ,  $F_3$ ), where linkage groups have not been completely disassociated by recombination events (i.e., maximum disequilibrium).

Recombinant inbred lines (RIL) (genetically related lines; usually  $>F_5$ , developed from continuously selfing  $F_2$  lines towards homozygosity) can be used as a mapping population. Information obtained from dominant markers can be maximized by using RIL because all loci are homozygous or nearly so. Under conditions of tight linkage (i.e., about  $<10\%$  recombination), dominant and co-dominant markers evaluated in RIL populations provide more information per individual than either marker type in backcross populations (Reiter *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 89:1477-1481 (1992), the entirety of which is herein incorporated by reference). However, as the distance between markers becomes larger (i.e., loci become more independent), the information in RIL populations decreases dramatically when compared to codominant markers.

Backcross populations (e.g., generated from a cross between a successful variety (recurrent parent) and another variety (donor parent) carrying a trait not present in the former) can be utilized as a mapping population. A series of backcrosses to the recurrent parent can be made to recover most of its desirable traits. Thus a population is created consisting of individuals nearly like the recurrent parent but each individual carries varying amounts or mosaic of genomic regions from the donor parent. Backcross populations can be useful for mapping dominant markers if all loci in the recurrent parent are homozygous and the donor and recurrent parent have contrasting polymorphic marker



alleles (Reiter *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 89:1477-1481 (1992)). Information obtained from backcross populations using either codominant or dominant markers is less than that obtained from F<sub>2</sub> populations because one, rather than two, recombinant gametes are sampled per plant. Backcross populations, however, are more informative (at  
 5 low marker saturation) when compared to RILs as the distance between linked loci increases in RIL populations (i.e. about 15% recombination). Increased recombination can be beneficial for resolution of tight linkages, but may be undesirable in the construction of maps with low marker saturation.

Near-isogenic lines (NIL) created by many backcrosses to produce an array of  
 10 individuals that are nearly identical in genetic composition except for the trait or genomic region under interrogation can be used as a mapping population. In mapping with NILs, only a portion of the polymorphic loci are expected to map to a selected region.

Bulk segregant analysis (BSA) is a method developed for the rapid identification of linkage between markers and traits of interest (Michelmore *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 88:9828-9832 (1991), the entirety of which is herein incorporated by  
 15 reference). In BSA, two bulked DNA samples are drawn from a segregating population originating from a single cross. These bulks contain individuals that are identical for a particular trait (resistant or susceptible to particular disease) or genomic region but arbitrary at unlinked regions (i.e. heterozygous). Regions unlinked to the target region  
 20 will not differ between the bulked samples of many individuals in BSA.

It is understood that one or more of the nucleic acid molecules of the present invention may be used as molecular markers. It is also understood that one or more of the protein molecules of the present invention may be used as molecular markers.

In accordance with this aspect of the present invention, a sample nucleic acid is  
 25 obtained from plants cells or tissues. Any source of nucleic acid may be used. Preferably, the nucleic acid is genomic DNA. The nucleic acid is subjected to restriction endonuclease digestion. For example, one or more EST nucleic acid molecule or

fragment thereof can be used as a probe in accordance with the above-described polymorphic methods. The polymorphism obtained in this approach can then be cloned to identify the mutation at the coding region which alters the protein's structure or regulatory region of the gene which affects its expression level.

5           In one aspect of the present invention, an evaluation can be conducted to determine whether a particular mRNA molecule is present. One or more of the nucleic acid molecules of the present invention, preferably one or more of the EST nucleic acid molecules of the present invention are utilized to detect the presence or quantity of the mRNA species. Such molecules are then incubated with cell or tissue extracts of a plant  
10 under conditions sufficient to permit nucleic acid hybridization. The detection of double-stranded probe-mRNA hybrid molecules is indicative of the presence of the mRNA; the amount of such hybrid formed is proportional to the amount of mRNA. Thus, such probes may be used to ascertain the level and extent of the mRNA production in a plant's cells or tissues. Such nucleic acid hybridization may be conducted under quantitative  
15 conditions (thereby providing a numerical value of the amount of the mRNA present). Alternatively, the assay may be conducted as a qualitative assay that indicates either that the mRNA is present, or that its level exceeds a user set, predefined value.

A principle of *in situ* hybridization is that a labeled, single-stranded nucleic acid probe will hybridize to a complementary strand of cellular DNA or RNA and, under the  
20 appropriate conditions, these molecules will form a stable hybrid. When nucleic acid hybridization is combined with histological techniques, specific DNA or RNA sequences can be identified within a single cell. An advantage of *in situ* hybridization over more conventional techniques for the detection of nucleic acids is that it allows an investigator to determine the precise spatial population (Angerer *et al.*, *Dev. Biol.* 101: 477-484  
25 (1984), the entirety of which is herein incorporated by reference; Angerer *et al.*, *Dev. Biol.* 112: 157-166 (1985), the entirety of which is herein incorporated by reference; Dixon *et al.*, *EMBO J.* 10: 1317-1324 (1991), the entirety of which is herein incorporated

by reference). *In situ* hybridization may be used to measure the steady-state level of RNA accumulation. It is a sensitive technique and RNA sequences present in as few as 5-10 copies per cell can be detected (Hardin *et al.*, *J. Mol. Biol.* 202: 417-431.(1989), the entirety of which is herein incorporated by reference). A number of protocols have been devised for *in situ* hybridization, each with tissue preparation, hybridization, and washing conditions (Meyerowitz, *Plant Mol. Biol. Rep.* 5: 242-250 (1987), the entirety of which is herein incorporated by reference; Cox and Goldberg, In: *Plant Molecular Biology: A Practical Approach* (ed. C.H. Shaw), pp. 1-35. IRL Press, Oxford (1988), the entirety of which is herein incorporated by reference; Raikhel *et al.*, *In situ RNA hybridization in plant tissues*. In *Plant Molecular Biology Manual*, vol. B9: 1-32. Kluwer Academic Publisher, Dordrecht, Belgium (1989), the entirety of which is herein incorporated by reference).

*In situ* hybridization also allows for the localization of proteins within a tissue or cell (Wilkinson, *In Situ Hybridization*, Oxford University Press, Oxford (1992), the entirety of which is herein incorporated by reference; Langdale, *In Situ Hybridization* 165-179 In: *The Maize Handbook*, eds. Freeling and Walbot, Springer-Verlag, New York (1994), the entirety of which is herein incorporated by reference). It is understood that one or more of the molecules of the present invention, preferably one or more of the EST nucleic acid molecules of the present invention or one or more of the antibodies of the present invention may be utilized to detect the level or pattern of a protein or fragment thereof by *in situ* hybridization.

Fluorescent *in situ* hybridization also enables the localization of a particular DNA sequence along a chromosome which is useful, among other uses, for gene mapping, following chromosomes in hybrid lines or detecting chromosomes with translocations, transversions or deletions. *In situ* hybridization has been used to identify chromosomes in several plant species (Griffor *et al.*, *Plant Mol. Biol.* 17: 101-109 (1991), the entirety of which is herein incorporated by reference; Gustafson *et al.*, *Proc. Nat'l. Acad. Sci.*

(U.S.A). 87: 1899-1902 (1990), herein incorporated by reference; Mukai and Gill, *Genome* 34: 448-452. (1991); Schwarzacher and Heslop-Harrison, *Genome* 34: 317-323 (1991); Wang *et al.*, *Jpn. J. Genet.* 66: 313-316 (1991), the entirety of which is herein incorporated by reference; Parra and Windle, *Nature Genetics*, 5: 17-21 (1993), the  
 5 entirety of which is herein incorporated by reference). It is understood that the nucleic acid molecules of the present invention may be used as probes or markers to localize sequences along a chromosome.

It is also understood that one or more of the molecules of the present invention, preferably one or more of the EST nucleic acid molecules of the present invention or one  
 10 or more of the antibodies of the present invention may be utilized to detect the expression level or pattern of a protein or mRNA thereof by *in situ* hybridization.

Another method to localize the expression of a molecule is tissue printing. Tissue printing provides a way to screen, at the same time on the same membrane many tissue sections from different plants or different developmental stages. Tissue-printing  
 15 procedures utilize films designed to immobilize proteins and nucleic acids. In essence, a freshly cut section of an organ is pressed gently onto nitrocellulose paper, nylon membrane or polyvinylidene difluoride membrane. Such membranes are commercially available (e.g. Millipore, Bedford, Massachusetts). The contents of the cut cell transfer onto the membrane, and the molecules are immobilized to the membrane. The  
 20 immobilized molecules form a latent print that can be visualized with appropriate probes. When a plant tissue print is made on nitrocellulose paper, the cell walls leave a physical print that makes the anatomy visible without further treatment (Varner and Taylor, *Plant Physiol.* 91: 31-33 (1989), the entirety of which is herein incorporated by reference).

Tissue printing on substrate films is described by Daoust, *Exp. Cell Res.* 12: 203-  
 25 211 (1957), the entirety of which is herein incorporated by reference, who detected amylase, protease, ribonuclease, and deoxyribonuclease in animal tissues using starch, gelatin, and agar films. These techniques can be applied to plant tissues (Yomo and

Taylor, *Planta* 112:35-43 (1973); Harris and Chrispeels, *Plant Physiol.* 56: 292-299 (1975). Advances in membrane technology have increased the range of applications of Daoust's tissue-printing techniques allowing (Cassab and Varner, *J. Cell. Biol.* 105: 2581-2588 (1987), the entirety of which is herein incorporated by reference; the

5 histochemical localization of various plant enzymes and deoxyribonuclease on nitrocellulose paper and nylon (Spruce *et al.*, *Phytochemistry*, 26: 2901-2903 (1987), the entirety of which is herein incorporated by reference; Barres *et al.* *Neuron* 5: 527-544 (1990), the entirety of which is herein incorporated by reference; the entirety of which is herein incorporated by reference; Reid and Pont-Lezica, *Tissue Printing: Tools for the*

10 *Study of Anatomy, Histochemistry, and Gene Expression*, Academic Press, New York, New York (1992), the entirety of which is herein incorporated by reference; Reid *et al.* *Plant Physiol.* 93: 160-165 (1990), herein incorporate by reference; Ye *et al.* *Plant J.* 1: 175-183 (1991), the entirety of which is herein incorporated by reference).

It is understood that one or more of the molecules of the present invention,

15 preferably one or more of the EST nucleic acid molecules of the present invention or one or more of the antibodies of the present invention may be utilized to detect the presence or quantity of a protein by tissue printing.

Further, it is also understood that any of the nucleic acid molecules of the present invention may be used as marker nucleic acids and or probes in connection with methods

20 that require probes or marker nucleic acids. As used herein, a probe is an agent that is utilized to determine an attribute or feature (e.g. presence or absence, location, correlation, etc.) or a molecule, cell, tissue or plant. As used herein, a marker nucleic acid is a nucleic acid molecule that is utilized to determine an attribute or feature (e.g., presence or absence, location, correlation, etc.) or a molecule, cell, tissue or plant.

25 A microarray-based method for high-throughput monitoring of plant gene expression may be utilized to measure gene-specific hybridization targets. This 'chip'-based approach involves using microarrays of nucleic acid molecules as gene-specific

hybridization targets to quantitatively measure expression of the corresponding plant genes (Schena *et al.*, *Science* 270: 467-470 (1995), the entirety of which is herein incorporated by reference; Shalon, Ph.D. Thesis. Stanford University (1996), the entirety of which is herein incorporated by reference). Every nucleotide in a large sequence can be  
 5 queried at the same time. Hybridization can be used to efficiently analyze large amounts of nucleotide sequence.

Several microarray methods have been described. One method compares the sequences to be analyzed by hybridization to a set of oligonucleotides representing all possible subsequences (Bains and Smith, *J. Theor. Biol.* 135: 303 (1989), the entirety of  
 10 which is herein incorporated by reference). A second method hybridizes the sample to an array of oligonucleotide probes. An array consisting of oligonucleotides complementary to subsequences of a target sequence can be used to determine the identity of a target sequence, measure its amount, and detect differences between the target and a reference sequence. Nucleic acid molecules microarrays may also be screened with protein  
 15 molecules or fragments thereof to determine nucleic acid molecules that specifically bind protein molecules or fragments thereof.

The microarray approach may be used with polypeptide targets (U.S. Patent No. 5,445,934; U.S. Patent No: 5,143,854; U.S. Patent No. 5,079,600; U.S. Patent No. 4,923,901, all of which are herein incorporated by reference in their entirety).  
 20 Essentially, polypeptides are synthesized on a substrate (microarray) and these polypeptides can be screened with either protein molecules or fragments thereof or nucleic acid molecules in order to screen for either protein molecules or fragments thereof or nucleic acid molecules that specifically bind the target polypeptides. Implementation of these techniques rely on recently developed combinatorial technologies to generate any  
 25 ordered array of a large number of oligonucleotide probes (Fodor *et al.*, *Science* 251:767-773 (1991), the entirety of which is herein incorporated by reference).

It is understood that one or more of the molecules of the present invention, preferably one or more of the nucleic acid molecules or protein molecules or fragments thereof of the present invention may be utilized in a microarray based method.

In a preferred embodiment of the present invention microarrays may be prepared  
 5 that comprise nucleic acid molecules where preferably at least 10%, preferably at least 25%, more preferably at least 50% and even more preferably at least 75%, 80%, 85%, 90% or 95% of the nucleic acid molecules located on that array are selected from the group of nucleic acid molecules that specifically hybridize to one or more nucleic acid molecule having a nucleic acid sequence selected from the group of SEQ ID NO: 1  
 10 through SEQ ID NO: 57264 or complement thereof or fragments of either.

A particular preferred microarray embodiment of the present invention is a microarray comprising nucleic acid molecules encoding genes or fragments thereof that are homologues of known genes or nucleic acid molecules that comprise genes or fragment thereof that elicit only limited or no matches to known genes. A further  
 15 preferred microarray embodiment of the present invention is a microarray comprising nucleic acid molecules having genes or fragments thereof that are homologues of known genes and nucleic acid molecules that comprise genes or fragment thereof that elicit only limited or no matches to known genes. Site-directed mutagenesis may be utilized to modify nucleic acid sequences, particularly as it is a technique that allows one or more of  
 20 the amino acids encoded by a nucleic acid molecule to be altered (e.g. a threonine to be replaced by a methionine). Three basic methods for site-directed mutagenesis are often employed. These are cassette mutagenesis (Wells *et al.*, *Gene* 34:315-23 (1985), the entirety of which is herein incorporated by reference), primer extension (Gilliam *et al.*, *Gene* 12:129-137 (1980), the entirety of which is herein incorporated by reference);  
 25 Zoller and Smith, *Methods Enzymol.* 100:468-500 (1983), the entirety of which is herein incorporated by reference; and Dalbadie-McFarland *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 79:6409-6413 (1982), the entirety of which is herein incorporated by reference) and

methods based upon PCR (Scharf *et al.*, *Science* 233:1076-1078 (1986), the entirety of which is herein incorporated by reference; Higuchi *et al.*, *Nucleic Acids Res.* 16:7351-7367 (1988), the entirety of which is herein incorporated by reference). Site-directed mutagenesis approaches are also described in European Patent 0 385 962, the entirety of which is herein incorporated by reference, European Patent 0 359 472, the entirety of which is herein incorporated by reference, and PCT Patent Application WO 93/07278, the entirety of which is herein incorporated by reference.

Site-directed mutagenesis strategies have been applied to plants for both *in vitro* as well as *in vivo* site-directed mutagenesis (Lanz *et al.*, *J. Biol. Chem.* 266:9971-6 (1991), the entirety of which is herein incorporated by reference; Kovgan and Zhdanov, *Biotechnologiya* 5:148-154; No. 207160n, Chemical Abstracts 110:225 (1989), the entirety of which is herein incorporated by reference; Ge *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86:4037-4041 (1989), the entirety of which is herein incorporated by reference, Zhu *et al.*, *J. Biol. Chem.* 271:18494-18498 (1996), Chu *et al.*, *Biochemistry* 33:6150-6157 (1994), the entirety of which is herein incorporated by reference, Small *et al.*, *EMBO J.* 11:1291-1296 (1992), the entirety of which is herein incorporated by reference, Cho *et al.*, *Mol. Biotechnol.* 8:13-16 (1997), Kita *et al.*, *J. Biol. Chem.* 271:26529-26535 (1996), the entirety of which is herein incorporated by reference, Jin *et al.*, *Mol. Microbiol.* 7:555-562 (1993), the entirety of which is herein incorporated by reference, Hatfield and Vierstra, *J. Biol. Chem.* 267:14799-14803 (1992), the entirety of which is herein incorporated by reference, Zhao *et al.*, *Biochemistry* 31:5093-5099 (1992), the entirety of which is herein incorporated by reference).

Any of the nucleic acid molecules of the present invention may either be modified by site-directed mutagenesis or used as, for example, nucleic acid molecules that are used to target other nucleic acid molecules for modification. It is understood that mutants with more than one altered nucleotide can be constructed using techniques that practitioners skilled in the art are familiar with such as isolating restriction fragments and ligating such



fragments into an expression vector (*see, for example, Sambrook et al., Molecular Cloning: A Laboratory Manual*, Cold Spring Harbor Press (1989)).

Sequence-specific DNA-binding proteins play a role in the regulation of transcription. The isolation of recombinant cDNAs encoding these proteins facilitates the biochemical analysis of their structural and functional properties. Genes encoding such DNA-binding proteins have been isolated using classical genetics (Vollbrecht *et al.*, *Nature* 350: 241-243 (1991), the entirety of which is herein incorporated by reference) and molecular biochemical approaches, including the screening of recombinant cDNA libraries with antibodies (Landschulz *et al.*, *Genes Dev.* 2: 786-800 (1988), the entirety of which is herein incorporated by reference) or DNA probes (Bodner *et al.*, *Cell* 55: 505-518 (1988), the entirety of which is herein incorporated by reference). In addition, an *in situ* screening procedure has been used and has facilitated the isolation of sequence-specific DNA-binding proteins from various plant species (Gilmartin *et al.*, *Plant Cell* 4: 839-849 (1992), the entirety of which is herein incorporated by reference; Schindler *et al.*, *EMBO J.* 11: 1261-1273 (1992) the entirety of which is herein incorporated by reference). An *in situ* screening protocol does not require the purification of the protein of interest (Vinson *et al.*, *Genes Dev.* 2: 801-806 (1988), the entirety of which is herein incorporated by reference; Singh *et al.*, *Cell* 52: 415-423 (1988), the entirety of which is herein incorporated by reference).

Steps may be employed to characterize DNA-protein interactions. The first is to identify promoter fragments that interact with DNA-binding proteins, to titrate binding activity, to determine the specificity of binding, and to determine whether a given DNA-binding activity can interact with related DNA sequences (Sambrook *et al.*, *Molecular Cloning: A Laboratory Manual*, 2<sup>nd</sup> edition. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York (1989). Electrophoretic mobility-shift assay is a widely used assay. The assay provides a simple, rapid, and sensitive method for detecting DNA-binding proteins based on the observation that the mobility of a DNA fragment through a

nondenaturing, low-ionic strength polyacrylamide gel is retarded upon association with a DNA-binding protein (Fried and Crother, *Nucleic Acids Res.* 9: 6505-6525 (1981), the entirety of which is herein incorporated by reference). When one or more specific binding activities have been identified, the exact sequence of the DNA bound by the protein may be determined. Several procedures for characterizing protein/DNA-binding sites are used, including methylation and ethylation interference assays (Maxam and Gilbert, *Methods Enzymol.* 65: 499-560 (1980), the entirety of which is herein incorporated by reference; Wissman and Hillen, *Methods Enzymol.* 208: 365-379 (1991), the entirety of which is herein incorporated by reference) and footprinting techniques employing DNase I (Galas and Schmitz, *Nucleic Acids Res.* 5: 3157-3170 (1978), the entirety of which is herein incorporated by reference), 1,10-phenanthroline-copper ion methods (Sigman *et al.*, *Methods Enzymol.* 208: 365-379 (1991), the entirety of which is herein incorporated by reference) or hydroxyl radical methods (Dixon *et al.*, *Methods Enzymol.* 208: 380-413 (1991), the entirety of which is herein incorporated by reference).

It is understood that one or more of the nucleic acid molecules of the present invention, preferably one or more of the EST nucleic acid molecules of the present invention may be utilized to identify a protein or fragment thereof that specifically binds to a nucleic acid molecule of the present invention. It is also understood that one or more of the protein molecules or fragments thereof of the present invention may be utilized to identify a nucleic acid molecule that specifically binds to it.

The two-hybrid system is based on the fact that many cellular functions are carried out by proteins that interact (physically) with one another. Two-hybrid systems have been used to probe the function of new proteins (Chien *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 88: 9578-9582 (1991) the entirety of which is herein incorporated by reference; Durfee *et al.*, *Genes Dev.* 7: 555-569 (1993) the entirety of which is herein incorporated by reference; Choi *et al.*, *Cell* 78: 499-512 (1994), the entirety of which is herein

incorporated by reference; Kranz *et al.*, *Genes Dev.* 8: 313-327 (1994), the entirety of which is herein incorporated by reference).

Interaction mating techniques have facilitated a number of two-hybrid studies of protein-protein interaction. Interaction mating has been used to examine interactions  
 5 between small sets of tens of proteins (Finley and Brent, *Proc. Natl. Acad. Sci. (U.S.A.)* 91: 12098-12984 (1994), the entirety of which is herein incorporated by reference), larger sets of hundreds of proteins, (Bendixen *et al.*, *Nucl. Acids Res.* 22: 1778-1779 (1994), the entirety of which is herein incorporated by reference) and to comprehensively map proteins encoded by a small genome (Bartel *et al.*, *Nature Genetics* 12: 72-77 (1996), the  
 10 entirety of which is herein incorporated by reference). This technique utilizes proteins fused to the DNA-binding domain and proteins fused to the activation domain. They are expressed in two different haploid yeast strains of opposite mating type, and the strains are mated to determine if the two proteins interact. Mating occurs when haploid yeast strains come into contact and result in the fusion of the two haploids into a diploid yeast  
 15 strain. An interaction can be determined by the activation of a two-hybrid reporter gene in the diploid strain. The primary advantage of this technique is that it reduces the number of yeast transformations needed to test individual interactions. It is understood that the protein-protein interactions of protein or fragments thereof of the present invention may be investigated using the two-hybrid system and that any of the nucleic  
 20 acid molecules of the present invention that encode such proteins or fragments thereof may be used to transform yeast in the two-hybrid system.

*Synechocystis* 6803 is a photosynthetic Cyanobacterium capable of oxygenic photosynthesis as well as heterotrophic growth in the absence of light. The entire genome has been sequenced, and it is reported to have a circular genome size of 3.57 Mbp containing 3168  
 25 potential open reading frames. Open reading frames (ORFs) were identified based upon their homology to other reported ORFs and by using ORF identification computer programs. Sixteen hundred potential ORFs were assigned based on their homology to previously identified ORFs.

Of these 1600 ORFs, 145 were identical to reported ORFs (Kaneko *et al.*, *DNA Research* 3:109-36 (1996), herein incorporated by reference in its entirety).

Several prokaryote promoters have been used in *Synechocystis* to express heterologous genes including the tac, lac, and lambda phage promoters (Bryant (ed.), *The Molecular Biology of Cyanobacteria*, Kluwer Academic Publishers, (1994); Ferino and Chauvat, *Gene* 84:257-266 (1989), both of which are herein incorporated by reference in their entirety). Several bacterial origins of replication such as RSF1010 and ACYC are reported to replicate in *Synechocystis* (Mermet-Bouvier and Chauvat, *Current Microbiology* 28:145-148 (1994); Kuhlemeier *et al.*, *Mol. Gen. Genet.* 184:249-254 (1981), both of which are herein incorporated by reference in their entirety).

*Synechocystis* has been used to study gene regulation by gene replacement through homologous recombination or by gene disruption using antibiotic resistance markers (Pakrasi *et al.*, *EMBO* 7:325-332 (1988), herein incorporated by reference in its entirety). In such gene regulation studies, double reciprocal homologous regions of the host genome flanking the gene of interest recombine to stably integrate the gene of interest into the genome. The gene of interest can be expressed once that gene has been stably integrated into the genome. Biochemical analysis can be performed to study the effect of the replaced or deleted gene.

It is understood that the agents of the present invention may be employed in a *Synechocystis* system.

Exogenous genetic material may be transferred into a plant cell and the plant cell regenerated into a whole, fertile or sterile plant. Exogenous genetic material is any genetic material, whether naturally occurring or otherwise, from any source that is capable of being inserted into any organism. Such genetic material may be transferred into either monocotyledons and dicotyledons including but not limited to the crops, maize and soybean (See specifically, Chistou, *Particle Bombardment for Genetic Engineering of Plants*, pp 63-69 (maize), pp50-60 (soybean), Biotechnology Intelligence Unit. Academic Press, San Diego, California (1996), the entirety of which is herein incorporated by

reference and generally Chistou, *Particle Bombardment for Genetic Engineering of Plants*, Biotechnology Intelligence Unit. Academic Press, San Diego, California (1996), the entirety of which is herein incorporated by reference).

Transfer of a nucleic acid that encodes for a protein can result in overexpression  
 5 of that protein in a transformed cell or transgenic plant. One or more of the proteins or fragments thereof encoded by nucleic acid molecules of the present invention may be overexpressed in a transformed cell or transformed plant. Such overexpression may be the result of transient or stable transfer of the exogenous material.

Exogenous genetic material may be transferred into a plant cell by the use of a  
 10 DNA vector or construct designed for such a purpose. Design of such a vector is generally within the skill of the art (*See*, Plant Molecular Biology: A Laboratory Manual eds. Clark, Springer, New York (1997), the entirety of which is herein incorporated by reference).

A construct or vector may include a plant promoter to express the protein or  
 15 protein fragment of choice. A number of promoters which are active in plant cells have been described in the literature. These include the nopaline synthase (NOS) promoter (Ebert *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 84:5745-5749 (1987), the entirety of which is herein incorporated by reference), the octopine synthase (OCS) promoter (which are carried on tumor-inducing plasmids of *Agrobacterium tumefaciens*), the caulimovirus  
 20 promoters such as the cauliflower mosaic virus (CaMV) 19S promoter (Lawton *et al.*, *Plant Mol. Biol.* 9:315-324 (1987), the entirety of which is herein incorporated by reference) and the CAMV 35S promoter (Odell *et al.*, *Nature* 313:810-812 (1985), the entirety of which is herein incorporated by reference), the figwort mosaic virus 35S-promoter, the light-inducible promoter from the small subunit of ribulose-1,5-bis-  
 25 phosphate carboxylase (ssRUBISCO), the Adh promoter (Walker *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 84:6624-6628 (1987), the entirety of which is herein incorporated by reference), the sucrose synthase promoter (Yang *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)*

87:4144-4148 (1990), the entirety of which is herein incorporated by reference), the R gene complex promoter (Chandler *et al.*, *The Plant Cell* 1:1175-1183 (1989), the entirety of which is herein incorporated by reference), and the chlorophyll a/b binding protein gene promoter, etc. These promoters have been used to create DNA constructs which  
 5 have been expressed in plants; *see, e.g.*, PCT publication WO 84/02913, herein incorporated by reference in its entirety.

Promoters which are known or are found to cause transcription of DNA in plant cells can be used in the present invention. Such promoters may be obtained from a variety of sources such as plants and plant viruses. It is preferred that the particular  
 10 promoter selected should be capable of causing sufficient expression to result in the production of an effective amount of a protein to cause the desired phenotype. In addition to promoters which are known to cause transcription of DNA in plant cells, other promoters may be identified for use in the current invention by screening a plant cDNA library for genes which are selectively or preferably expressed in the target tissues or  
 15 cells.

For the purpose of expression in source tissues of the plant, such as the leaf, seed, root or stem, it is preferred that the promoters utilized in the present invention have relatively high expression in these specific tissues. For this purpose, one may choose from a number of promoters for genes with tissue- or cell-specific or -enhanced  
 20 expression. Examples of such promoters reported in the literature include the chloroplast glutamine synthetase GS2 promoter from pea (Edwards *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 87:3459-3463 (1990), herein incorporated by reference in its entirety), the chloroplast fructose-1,6-biphosphatase (FBPase) promoter from wheat (Lloyd *et al.*, *Mol. Gen. Genet.* 225:209-216 (1991), herein incorporated by reference in its entirety), the  
 25 nuclear photosynthetic ST-LS1 promoter from potato (Stockhaus *et al.*, *EMBO J.* 8:2445-2451 (1989), herein incorporated by reference in its entirety), the phenylalanine ammonia-lyase (PAL) promoter and the chalcone synthase (CHS) promoter from

*Arabidopsis thaliana*. Also reported to be active in photosynthetically active tissues are the ribulose-1,5-bisphosphate carboxylase (RbcS) promoter from eastern larch (*Larix laricina*), the promoter for the *cab* gene, *cab6*, from pine (Yamamoto *et al.*, *Plant Cell Physiol.* 35:773-778 (1994), herein incorporated by reference in its entirety), the promoter for the Cab-1 gene from wheat (Fejes *et al.*, *Plant Mol. Biol.* 15:921-932 (1990), herein incorporated by reference in its entirety), the promoter for the CAB-1 gene from spinach (Lubberstedt *et al.*, *Plant Physiol.* 104:997-1006 (1994), herein incorporated by reference in its entirety), the promoter for the *cab1R* gene from rice (Luan *et al.*, *Plant Cell.* 4:971-981 (1992), the entirety of which is herein incorporated by reference), the pyruvate, orthophosphate dikinase (PPDK) promoter from maize (Matsuoka *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 90: 9586-9590 (1993), herein incorporated by reference in its entirety), the promoter for the tobacco *Lhcb1\*2* gene (Cerdan *et al.*, *Plant Mol. Biol.* 33: 245-255. (1997), herein incorporated by reference in its entirety), the *Arabidopsis thaliana* SUC2 sucrose-H<sup>+</sup> symporter promoter (Truernit *et al.*, *Planta.* 196: 564-570 (1995), herein incorporated by reference in its entirety), and the promoter for the thylacoid membrane proteins from spinach (*psaD*, *psaF*, *psaE*, *PC*, *FNR*, *atpC*, *atpD*, *cab*, *rbcS*). Other promoters for the chlorophyll a/b-binding proteins may also be utilized in the present invention, such as the promoters for *Lhcb* gene and *PsbP* gene from white mustard (*Sinapis alba*; Kretsch *et al.*, *Plant Mol. Biol.* 28: 219-229 (1995), the entirety of which is herein incorporated by reference).

For the purpose of expression in sink tissues of the plant, such as the tuber of the potato plant, the fruit of tomato, or the seed of maize, wheat, rice, and barley, it is preferred that the promoters utilized in the present invention have relatively high expression in these specific tissues. A number of promoters for genes with tuber-specific or -enhanced expression are known, including the class I patatin promoter (Bevan *et al.*, *EMBO J.* 8: 1899-1906 (1986); Jefferson *et al.*, *Plant Mol. Biol.* 14: 995-1006 (1990), both of which are herein incorporated by reference in its entirety), the promoter for the

potato tuber ADPGPP genes, both the large and small subunits, the sucrose synthase promoter (Salanoubat and Belliard, *Gene*. 60: 47-56 (1987), Salanoubat and Belliard, *Gene*. 84: 181-185 (1989), both of which are incorporated by reference in their entirety), the promoter for the major tuber proteins including the 22 kd protein complexes and  
 5 proteinase inhibitors (Hannapel, *Plant Physiol.* 101: 703-704 (1993), herein incorporated by reference in its entirety), the promoter for the granule bound starch synthase gene (GBSS) (Visser *et al.*, *Plant Mol. Biol.* 17: 691-699 (1991), herein incorporated by reference in its entirety), and other class I and II patatins promoters (Koster-Topfer *et al.*, *Mol Gen Genet.* 219: 390-396 (1989); Mignery *et al.*, *Gene*. 62: 27-44 (1988), both of  
 10 which are herein incorporated by reference in their entirety).

Other promoters can also be used to express a fructose 1,6 biphosphate aldolase gene in specific tissues, such as seeds or fruits. The promoter for  $\beta$ -conglycinin (Chen *et al.*, *Dev. Genet.* 10: 112-122 (1989), herein incorporated by reference in its entirety) or other seed-specific promoters such as the napin and phaseolin promoters, can be used.

15 The zeins are a group of storage proteins found in maize endosperm. Genomic clones for zein genes have been isolated (Pedersen *et al.*, *Cell* 29: 1015-1026 (1982), herein incorporated by reference in its entirety), and the promoters from these clones, including the 15 kD, 16 kD, 19 kD, 22 kD, 27 kD, and gamma genes, could also be used. Other promoters known to function, for example, in maize, include the promoters for the  
 20 following genes: *waxy*, *Brittle*, *Shrunken 2*, Branching enzymes I and II, starch synthases, debranching enzymes, oleosins, glutelins, and sucrose synthases. A particularly preferred promoter for maize endosperm expression is the promoter for the glutelin gene from rice, more particularly the Osgt-1 promoter (Zheng *et al.*, *Mol. Cell Biol.* 13: 5829-5842 (1993), herein incorporated by reference in its entirety). Examples of promoters suitable  
 25 for expression in wheat include those promoters for the ADPglucose pyrophosphorylase (ADPGPP) subunits, the granule bound and other starch synthases, the branching and debranching enzymes, the embryogenesis-abundant proteins, the gliadins, and the



glutenins. Examples of such promoters in rice include those promoters for the ADPGPP subunits, the granule bound and other starch synthases, the branching enzymes, the debranching enzymes, sucrose synthases, and the glutelins. A particularly preferred promoter is the promoter for rice glutelin, Osgt-1. Examples of such promoters for barley  
 5 include those for the ADPGPP subunits, the granule bound and other starch synthases, the branching enzymes, the debranching enzymes, sucrose synthases, the hordeins, the embryo globulins, and the aleurone specific proteins.

Root specific promoters may also be used. An example of such a promoter is the promoter for the acid chitinase gene (Samac *et al.*, *Plant Mol. Biol.* 25: 587-596 (1994),  
 10 the entirety of which is herein incorporated by reference). Expression in root tissue could also be accomplished by utilizing the root specific subdomains of the CaMV35S promoter that have been identified (Lam *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86:7890-7894 (1989), herein incorporated by reference in its entirety). Other root cell specific promoters include those reported by Conkling *et al.* (Conkling *et al.*, *Plant Physiol.*  
 15 93:1203-1211 (1990), the entirety of which is herein incorporated by reference).

Additional promoters that may be utilized are described, for example, in U.S. Patent Nos. 5,378,619, 5,391,725, 5,428,147, 5,447,858, 5,608,144, 5,608,144, 5,614,399, 5,633,441, 5,633,435, and 4,633,436, all of which are herein incorporated in their entirety. In addition, a tissue specific enhancer may be used (Fromm *et al.*, *The*  
 20 *Plant Cell* 1:977-984 (1989), the entirety of which is herein incorporated by reference).

Constructs or vectors may also include, with the coding region of interest, a nucleic acid sequence that acts, in whole or in part, to terminate transcription of that region. For example, such sequences have been isolated including the Tr7 3' sequence and the nos 3' sequence (Ingelbrecht *et al.*, *The Plant Cell* 1:671-680 (1989), the entirety  
 25 of which is herein incorporated by reference; Bevan *et al.*, *Nucleic Acids Res.* 11:369-385 (1983), the entirety of which is herein incorporated by reference), or the like.

A vector or construct may also include regulatory elements. Examples of such include the Adh intron 1 (Callis *et al.*, *Genes and Develop. 1*:1183-1200 (1987), the entirety of which is herein incorporated by reference), the sucrose synthase intron (Vasil *et al.*, *Plant Physiol.* 91:1575-1579 (1989), the entirety of which is herein incorporated by reference) and the TMV omega element (Gallie *et al.*, *The Plant Cell 1*:301-311 (1989), the entirety of which is herein incorporated by reference). These and other regulatory elements may be included when appropriate.

A vector or construct may also include a selectable marker. Selectable markers may also be used to select for plants or plant cells that contain the exogenous genetic material. Examples of such include, but are not limited to, a neo gene (Potrykus *et al.*, *Mol. Gen. Genet.* 199:183-188 (1985), the entirety of which is herein incorporated by reference) which codes for kanamycin resistance and can be selected for using kanamycin, G418, etc.; a bar gene which codes for bialaphos resistance; a mutant EPSP synthase gene (Hinchey *et al.*, *Bio/Technology 6*:915-922 (1988), the entirety of which is herein incorporated by reference) which encodes glyphosate resistance; a nitrilase gene which confers resistance to bromoxynil (Stalker *et al.*, *J. Biol. Chem.* 263:6310-6314 (1988), the entirety of which is herein incorporated by reference); a mutant acetolactate synthase gene (ALS) which confers imidazolinone or sulphonylurea resistance (European Patent Application 154,204 (Sept. 11, 1985), the entirety of which is herein incorporated by reference); and a methotrexate resistant DHFR gene (Thillet *et al.*, *J. Biol. Chem.* 263:12500-12508 (1988), the entirety of which is herein incorporated by reference).

A vector or construct may also include a transit peptide. Incorporation of a suitable chloroplast transit peptide may also be employed (European Patent Application Publication Number 0218571, the entirety of which is herein incorporated by reference). Translational enhancers may also be incorporated as part of the vector DNA. DNA constructs could contain one or more 5' non-translated leader sequences which may serve to enhance expression of the gene products from the resulting mRNA transcripts. Such

sequences may be derived from the promoter selected to express the gene or can be specifically modified to increase translation of the mRNA. Such regions may also be obtained from viral RNAs, from suitable eukaryotic genes, or from a synthetic gene sequence. For a review of optimizing expression of transgenes, see Koziel *et al.*, *Plant*  
 5 *Mol. Biol.* 32:393-405 (1996), the entirety of which is herein incorporated by reference.

A vector or construct may also include a screenable marker. Screenable markers may be used to monitor expression. Exemplary screenable markers include a  $\beta$ -glucuronidase or uidA gene (GUS) which encodes an enzyme for which various chromogenic substrates are known (Jefferson, *Plant Mol. Biol. Rep.* 5: 387-405 (1987),  
 10 the entirety of which is herein incorporated by reference; Jefferson *et al.*, *EMBO J.* 6: 3901-3907 (1987), the entirety of which is herein incorporated by reference); an R-locus gene, which encodes a product that regulates the production of anthocyanin pigments (red color) in plant tissues ((Dellaporta *et al.*, *Stadler Symposium* 11:263-282 (1988), the entirety of which is herein incorporated by reference); a  $\beta$ -lactamase gene (Sutcliffe *et al.*,  
 15 *Proc. Natl. Acad. Sci. (U.S.A.)* 75: 3737-3741 (1978), the entirety of which is herein incorporated by reference), a gene which encodes an enzyme for which various chromogenic substrates are known (e.g., PADAC, a chromogenic cephalosporin); a luciferase gene (Ow *et al.*, *Science* 234: 856-859 (1986), the entirety of which is herein incorporated by reference) a xylE gene (Zukowsky *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)*  
 20 80:1101-1105 (1983), the entirety of which is herein incorporated by reference) which encodes a catechol dioxygenase that can convert chromogenic catechols; an  $\alpha$ -amylase gene (Ikata *et al.*, *Bio/Technol.* 8:241-242 (1990), the entirety of which is herein incorporated by reference); a tyrosinase gene (Katz *et al.*, *J. Gen. Microbiol.* 129:2703-2714 (1983), the entirety of which is herein incorporated by reference) which encodes an  
 25 enzyme capable of oxidizing tyrosine to DOPA and dopaquinone which in turn condenses to melanin; an  $\alpha$ -galactosidase, which will turn a chromogenic  $\alpha$ -galactose substrate.

Included within the terms “selectable or screenable marker genes” are also genes which encode a scriptable marker whose secretion can be detected as a means of identifying or selecting for transformed cells. Examples include markers which encode a secretable antigen that can be identified by antibody interaction, or even secretable enzymes which can be detected catalytically. Secretable proteins fall into a number of classes, including small, diffusible proteins detectable, *e.g.*, by ELISA, small active enzymes detectable in extracellular solution (*e.g.*,  $\alpha$ -amylase,  $\beta$ -lactamase, phosphinothricin transferase), or proteins which are inserted or trapped in the cell wall (such as proteins which include a leader sequence such as that found in the expression unit of extension or tobacco PR-S). Other possible selectable and/or screenable marker genes will be apparent to those of skill in the art.

Methods and compositions for transforming a bacteria and other microorganisms are known in the art (see for example Sambrook *et al.*, *Molecular Cloning: A Laboratory Manual*, Second Edition, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., (1989), the entirety of which is herein incorporated by reference).

There are many methods for introducing transforming nucleic acid molecules into plant cells. Suitable methods are believed to include virtually any method by which nucleic acid molecules may be introduced into a cell, such as by *Agrobacterium* infection or direct delivery of nucleic acid molecules such as, for example, by PEG-mediated transformation, by electroporation or by acceleration of DNA coated particles, etc. (Pottkyus, *Ann. Rev. Plant Physiol. Plant Mol. Biol.* 42:205-225 (1991), the entirety of which is herein incorporated by reference; Vasil, *Plant Mol. Biol.* 25: 925-937 (1994), the entirety of which is herein incorporated by reference. For example, electroporation has been used to transform maize protoplasts (Fromm *et al.*, *Nature* 312:791-793 (1986), the entirety of which is herein incorporated by reference).

Other vector systems suitable for introducing transforming DNA into a host plant cell includes but is not limited to binary artificial chromosome (BIBAC) vectors

(Hamilton *et al.*, *Gene* 200:107-116, (1997), the entirety of which is herein incorporated by reference, and transfection with RNA viral vectors (Della-Cioppa *et al.*, *Ann. N.Y. Acad. Sci.* (1996), 792 (Engineering Plants for Commercial Products and Applications), 57-61, the entirety of which is herein incorporated by reference.

- 5 Technology for introduction of DNA into cells is well known to those of skill in the art. Four general methods for delivering a gene into cells have been described: (1) chemical methods (Graham and van der Eb, *Virology*, 54:536-539 (1973), the entirety of which is herein incorporated by reference); (2) physical methods such as microinjection (Capecchi, *Cell* 22:479-488 (1980), electroporation (Wong and Neumann, *Biochem.*
- 10 *Biophys. Res. Commun.*, 107:584-587 (1982); Fromm *et al.*, *Proc. Natl. Acad. Sci. USA*, 82:5824-5828 (1985); U. S. Patent No. 5,384,253; and the gene gun (Johnston and Tang, *Methods Cell Biol.* 43:353-365 (1994), all of which the entirety is herein incorporated by reference); (3) viral vectors (Clapp, *Clin. Perinatol.*, 20:155-168 (1993); Lu *et al.*, *J. Exp. Med.*, 178:2089-2096 (1993); Eglitis and Anderson, *Biotechniques*, 6:608-614 (1988), all
- 15 of which the entirety is herein incorporated by reference); and (4) receptor-mediated mechanisms (Curiel *et al.*, *Hum. Gen. Ther.*, 3:147-154 (1992); Wagner *et al.*, *Proc. Natl. Acad. Sci. USA*, 89:6099-6103 (1992), all of which the entirety is herein incorporated by reference).

- Acceleration methods that may be used include, for example, microprojectile
- 20 bombardment and the like. One example of a method for delivering transforming nucleic acid molecules to plant cells is microprojectile bombardment. This method has been reviewed by Yang and Christou, eds., *Particle Bombardment Technology for Gene Transfer*, Oxford Press, Oxford, England (1994), the entirety of which is herein incorporated by reference). Non-biological particles (microprojectiles) that may be
- 25 coated with nucleic acids and delivered into cells by a propelling force. Exemplary particles include those comprised of tungsten, gold, platinum, and the like.

A particular advantage of microprojectile bombardment, in addition to it being an effective means of reproducibly, and stably transforming monocotyledons, is that neither the isolation of protoplasts (Cristou *et al.*, *Plant Physiol.* 87:671-674 (1988), the entirety of which is herein incorporated by reference) nor the susceptibility of *Agrobacterium* infection is required. An illustrative embodiment of a method for delivering DNA into maize cells by acceleration is a biolistics g-particle delivery system, which can be used to propel particles coated with DNA through a screen, such as a stainless steel or Nytex screen, onto a filter surface covered with corn cells cultured in suspension. Gordon-Kamm *et al.*, describes the basic procedure for coating tungsten particles with DNA (Gordon-Kamm *et al.*, *Plant Cell* 2: 603-618 (1990), the entirety of which is herein incorporated by reference). The screen disperses the tungsten nucleic acid particles so that they are not delivered to the recipient cells in large aggregates. A particle delivery system suitable for use with the present invention is the helium acceleration PDS-1000/He gun which is available from Bio-Rad Laboratories (Bio-Rad, Hercules, California)(Sanford *et al.*, *Technique* 3:3-16 (1991), the entirety of which is herein incorporated by reference).

For the bombardment, cells in suspension may be concentrated on filters. Filters containing the cells to be bombarded are positioned at an appropriate distance below the microprojectile stopping plate. If desired, one or more screens are also positioned between the gun and the cells to be bombarded.

Alternatively, immature embryos or other target cells may be arranged on solid culture medium. The cells to be bombarded are positioned at an appropriate distance below the macroprojectile stopping plate. If desired, one or more screens are also positioned between the acceleration device and the cells to be bombarded. Through the use of techniques set forth herein one may obtain up to 1000 or more foci of cells transiently expressing a marker gene. The number of cells in a focus which express the

exogenous gene product 48 hours post-bombardment often range from one to ten and average one to three.

In bombardment transformation, one may optimize the prebombardment culturing conditions and the bombardment parameters to yield the maximum numbers of stable transformants. Both the physical and biological parameters for bombardment are important in this technology. Physical factors are those that involve manipulating the DNA/microprojectile precipitate or those that affect the flight and velocity of either the macro- or microprojectiles. Biological factors include all steps involved in manipulation of cells before and immediately after bombardment, the osmotic adjustment of target cells to help alleviate the trauma associated with bombardment, and also the nature of the transforming DNA, such as linearized DNA or intact supercoiled plasmids. It is believed that pre-bombardment manipulations are especially important for successful transformation of immature embryos. In another alternative embodiment, plastids can be stably transformed. Methods disclosed for plastid transformation in higher plants include the particle gun delivery of DNA containing a selectable marker and targeting of the DNA to the plastid genome through homologous recombination (Svab *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 87:8526-8530 (1990); Svab and Maliga, *Proc. Natl. Acad. Sci. (U.S.A.)* 90:913-917 (1993); Staub and Maliga, *EMBO J.* 12:601-606 (1993); U.S. Patents 5,451,513 and 5,545,818, all of which are herein incorporated by reference in their entirety).

Accordingly, it is contemplated that one may wish to adjust various aspects of the bombardment parameters in small scale studies to fully optimize the conditions. One may particularly wish to adjust physical parameters such as gap distance, flight distance, tissue distance, and helium pressure. One may also minimize the trauma reduction factors by modifying conditions which influence the physiological state of the recipient cells and which may therefore influence transformation and integration efficiencies. For example, the osmotic state, tissue hydration and the subculture stage or cell cycle of the

recipient cells may be adjusted for optimum transformation. The execution of other routine adjustments will be known to those of skill in the art in light of the present disclosure.

*Agrobacterium*-mediated transfer is a widely applicable system for introducing  
 5 genes into plant cells because the DNA can be introduced into whole plant tissues, thereby bypassing the need for regeneration of an intact plant from a protoplast. The use of *Agrobacterium*-mediated plant integrating vectors to introduce DNA into plant cells is well known in the art. See, for example the methods described (Fraley *et al.*, *Biotechnology* 3:629-635 (1985); Rogers *et al.*, *Meth. In Enzymol.*, 153:253-277 (1987),  
 10 both of which are herein incorporated by reference in their entirety. Further, the integration of the Ti-DNA is a relatively precise process resulting in few rearrangements. The region of DNA to be transferred is defined by the border sequences, and intervening DNA is usually inserted into the plant genome as described (Spielmann *et al.*, *Mol. Gen. Genet.*, 205:34 (1986), the entirety of which is herein incorporated by reference).

15 Modern *Agrobacterium* transformation vectors are capable of replication in *E. coli* as well as *Agrobacterium*, allowing for convenient manipulations as described (Klee *et al.*, *In: Plant DNA Infectious Agents*, T. Hohn and J. Schell, eds., Springer-Verlag, New York, pp. 179-203 (1985), the entirety of which is herein incorporated by reference. Moreover, recent technological advances in vectors for *Agrobacterium*-mediated gene  
 20 transfer have improved the arrangement of genes and restriction sites in the vectors to facilitate construction of vectors capable of expressing various polypeptide coding genes. The vectors described have convenient multi-linker regions flanked by a promoter and a polyadenylation site for direct expression of inserted polypeptide coding genes and are suitable for present purposes (Rogers *et al.*, *Meth. In Enzymol.*, 153:253-277 (1987), the  
 25 entirety of which is herein incorporated by reference). In addition, *Agrobacterium* containing both armed and disarmed Ti genes can be used for the transformations. In



those plant strains where *Agrobacterium*-mediated transformation is efficient, it is the method of choice because of the facile and defined nature of the gene transfer.

A transgenic plant formed using *Agrobacterium* transformation methods typically contains a single gene on one chromosome. Such transgenic plants can be referred to as  
 5 being heterozygous for the added gene. More preferred is a transgenic plant that is homozygous for the added structural gene; *i.e.*, a transgenic plant that contains two added genes, one gene at the same locus on each chromosome of a chromosome pair. A homozygous transgenic plant can be obtained by sexually mating (selfing) an independent segregant transgenic plant that contains a single added gene, germinating  
 10 some of the seed produced and analyzing the resulting plants produced for the gene of interest.

It is also to be understood that two different transgenic plants can also be mated to produce offspring that contain two independently segregating added, exogenous genes. Selfing of appropriate progeny can produce plants that are homozygous for both added,  
 15 exogenous genes that encode a polypeptide of interest. Back-crossing to a parental plant and out-crossing with a non-transgenic plant are also contemplated, as is vegetative propagation.

Transformation of plant protoplasts can be achieved using methods based on calcium phosphate precipitation, polyethylene glycol treatment, electroporation, and  
 20 combinations of these treatments. See for example (Potrykus *et al.*, *Mol. Gen. Genet.*, 205:193-200 (1986); Lorz *et al.*, *Mol. Gen. Genet.*, 199:178, (1985); Fromm *et al.*, *Nature*, 319:791,(1986); Uchimiya *et al.*, *Mol. Gen. Genet.*:204:204, (1986); Callis *et al.*, *Genes and Development*, 1183,(1987); Marcotte *et al.*, *Nature*, 335:454, (1988), all of which the entirety is herein incorporated by reference).

25 Application of these systems to different plant strains depends upon the ability to regenerate that particular plant strain from protoplasts. Illustrative methods for the regeneration of cereals from protoplasts are described (Fujimura *et al.*, *Plant Tissue*

*Culture Letters*, 2:74,(1985); Toriyama *et al.*, *Theor Appl. Genet.* 205:34. (1986); Yamada *et al.*, *Plant Cell Rep.*, 4:85, (1986); Abdullah *et al.*, *Biotechnology*, 4:1087, (1986), all of which the entirety is herein incorporated by reference).

To transform plant strains that cannot be successfully regenerated from  
 5 protoplasts, other ways to introduce DNA into intact cells or tissues can be utilized. For example, regeneration of cereals from immature embryos or explants can be effected as described (Vasil, *Biotechnology*, 6:397,(1988), the entirety of which is herein incorporated by reference). In addition, "particle gun" or high-velocity microprojectile technology can be utilized (Vasil *et al.*, *Bio/Technology* 10:667, (1992), the entirety of  
 10 which is herein incorporated by reference).

Using the latter technology, DNA is carried through the cell wall and into the cytoplasm on the surface of small metal particles as described (Klein *et al.*, *Nature*, 328:70, (1987); Klein *et al.*, *Proc. Natl. Acad. Sci. USA*, 85:8502-8505, (1988); McCabe *et al.*, *Biotechnology*, 6:923, (1988), all of which the entirety is herein incorporated by  
 15 reference). The metal particles penetrate through several layers of cells and thus allow the transformation of cells within tissue explants.

Other methods of cell transformation can also be used and include but are not limited to introduction of DNA into plants by direct DNA transfer into pollen (Zhou *et al.*, *Methods in Enzymology*, 101:433, (1983); Hess *et al.*, *Intern Rev. Cytol.*, 107:367, (1987); Luo *et al.*, *Plant Mol Biol. Reporter*, 6:165, (1988), all of which the entirety is  
 20 herein incorporated by reference), by direct injection of DNA into reproductive organs of a plant (Pena *et al.*, *Nature*, 325:274, (1987), the entirety of which is herein incorporated by reference), or by direct injection of DNA into the cells of immature embryos followed by the rehydration of dessicated embryos (Neuhaus *et al.*, *Theor. Appl. Genet.*, 75:30,  
 25 (1987), the entirety of which is herein incorporated by reference).

The regeneration, development, and cultivation of plants from single plant protoplast transformants or from various transformed explants is well known in the art

(Weissbach and Weissbach, *In: Methods for Plant Molecular Biology*, (Eds.), Academic Press, Inc. San Diego, CA, (1988), the entirety of which is herein incorporated by reference). This regeneration and growth process typically includes the steps of selection of transformed cells, culturing those individualized cells through the usual stages of embryonic development through the rooted plantlet stage. Transgenic embryos and seeds are similarly regenerated. The resulting transgenic rooted shoots are thereafter planted in an appropriate plant growth medium such as soil.

The development or regeneration of plants containing the foreign, exogenous gene that encodes a protein of interest is well known in the art. Preferably, the regenerated plants are self-pollinated to provide homozygous transgenic plants, as discussed before. Otherwise, pollen obtained from the regenerated plants is crossed to seed-grown plants of agronomically important lines. Conversely, pollen from plants of these important lines is used to pollinate regenerated plants. A transgenic plant of the present invention containing a desired polypeptide is cultivated using methods well known to one skilled in the art.

There are a variety of methods for the regeneration of plants from plant tissue. The particular method of regeneration will depend on the starting plant tissue and the particular plant species to be regenerated.

Methods for transforming dicots, primarily by use of *Agrobacterium tumefaciens*, and obtaining transgenic plants have been published for cotton (U. S. Patent No. 5,004,863, U.S. Patent No. 5,159,135, U.S. Patent No. 5,518,908, all of which the entirety is herein incorporated by reference); soybean (U. S. Patent No. 5,569,834, U. S. Patent No. 5,416,011, McCabe *et al.*, *Biotechnology* 6:923, (1988), Christou *et al.*, *Plant Physiol.*, 87:671-674 (1988), all of which the entirety is herein incorporated by reference); *Brassica* ( U. S. Patent No. 5,463,174, the entirety of which is herein incorporated by reference); peanut (Cheng *et al.*, *Plant Cell Rep.* 15: 653-657 (1996), McKently *et al.*, *Plant Cell Rep.* 14:699-703 (1995), all of which the entirety is herein

incorporated by reference); papaya (Yang *et al.*, (1996), the entirety of which is herein incorporated by reference); pea (Grant *et al.*, *Plant Cell Rep.* 15:254-258, (1995), the entirety of which is herein incorporated by reference).

Transformation of monocotyledons using electroporation, particle bombardment, and *Agrobacterium* have also been reported. Transformation and plant regeneration have been achieved in asparagus (Bytebier *et al.*, *Proc. Natl. Acad. Sci. USA* 84:5345, (1987), the entirety of which is herein incorporated by reference); barley (Wan and Lemaux, *Plant Physiol* 104:37, (1994), the entirety of which is herein incorporated by reference); maize (Rhodes *et al.*, *Science* 240: 204, (1988), Gordon-Kamm *et al.*, *Plant Cell*, 2:603, (1990), Fromm *et al.*, *Bio/Technology* 8:833, (1990), Koziel *et al.*, *Bio/Technology* 11:194, (1993), Armstrong *et al.*, *Crop Science* 35:550-557, (1995), all of which the entirety is herein incorporated by reference); oat (Somers *et al.*, *Bio/Technology*, 10:1589, (1992), the entirety of which is herein incorporated by reference); orchardgrass (Horn *et al.*, *Plant Cell Rep.* 7:469, (1988), the entirety of which is herein incorporated by reference); rice (Toriyama *et al.*, *Theor Appl. Genet.* 205:34, (1986); Park *et al.*, *Plant Mol. Biol.*, 32: 1135-1148, (1996); Abedinia *et al.*, *Aust. J. Plant Physiol.* 24:133-141, (1997); Zhang and Wu, *Theor. Appl. Genet.* 76:835, (1988); Zhang *et al.*, *Plant Cell Rep.* 7:379, (1988); Battraw and Hall, *Plant Sci.* 86:191-202, (1992); Christou *et al.*, *Bio/Technology* 9:957, (1991), all of which the entirety is herein incorporated by reference); sugarcane (Bower and Birch, *Plant J.* 2:409, (1992), the entirety of which is herein incorporated by reference); tall fescue (Wang *et al.*, *Bio/Technology* 10:691, (1992), the entirety of which is herein incorporated by reference), and wheat (Vasil *et al.*, *Bio/Technology* 10:667, (1992), the entirety of which is herein incorporated by reference; U. S. Patent No. 5,631,152, the entirety of which is herein incorporated by reference.

Assays for gene expression based on the transient expression of cloned nucleic acid constructs have been developed by introducing the nucleic acid molecules into plant cells by polyethylene glycol treatment, electroporation, or particle bombardment

(Marcotte, *et al.*, *Nature*, 335: 454-457 (1988), the entirety of which is herein incorporated by reference; Marcotte, *et al.*, *Plant Cell*, 1: 523-532 (1989), the entirety of which is herein incorporated by reference; McCarty, *et al.*, *Cell* 66: 895-905 (1991), the entirety of which is herein incorporated by reference; Hattori, *et al.*, *Genes Dev.* 6: 609-618 (1992), the entirety of which is herein incorporated by reference; Goff, *et al.*, *EMBO J.* 9: 2517-2522 (1990), the entirety of which is herein incorporated by reference).

Transient expression systems may be used to functionally dissect gene constructs (*See generally*, Mailga *et al.*, *Methods in Plant Molecular Biology*, Cold Spring Harbor Press (1995)).

Any of the nucleic acid molecules of the present invention may be introduced into a plant cell in a permanent or transient manner in combination with other genetic elements such as vectors, promoters enhancers etc. Further any of the nucleic acid molecules of the present invention may be introduced into a plant cell in a manner that allows for over expression of the protein or fragment thereof encoded by the nucleic acid molecule.

Cosuppression is the reduction in expression levels, usually at the level of RNA, of a particular endogenous gene or gene family by the expression of a homologous sense construct that is capable of transcribing mRNA of the same strandedness as the transcript of the endogenous gene (Napoli *et al.*, *Plant Cell* 2: 279-289 (1990), the entirety of which is herein incorporated by reference; van der Krol *et al.*, *Plant Cell* 2: 291-299 (1990), the entirety of which is herein incorporated by reference). Cosuppression may result from stable transformation with a single copy nucleic acid molecule that is homologous to a nucleic acid sequence found with the cell (Prollis and Meyer, *Plant J.* 2:465-475 (1992), the entirety of which is herein incorporated by reference) or with multiple copies of a nucleic acid molecule that is homologous to a nucleic acid sequence found with the cell (Mittlesten *et al.*, *Mol. Gen. Genet.* 244: 325-330 (1994), the entirety of which is herein incorporated by reference). Genes, even though different, linked to homologous

promoters may result in the cosuppression of the linked genes (Vaucheret, *C.R. Acad. Sci. III* 316: 1471-1483 (1993), the entirety of which is herein incorporated by reference).

This technique has, for example been applied to generate white flowers from red petunia and tomatoes that do not ripen on the vine. Up to 50% of petunia transformants that contained a sense copy of the chalcone synthase (CHS) gene produced white flowers or floral sectors; this was as a result of the post-transcriptional loss of mRNA encoding CHS (Flavell, *Proc. Natl. Acad. Sci. (U.S.A.)* 91:3490-3496 (1994)), the entirety of which is herein incorporated by reference). Cosuppression may require the coordinate transcription of the transgene and the endogenous gene, and can be reset by a developmental control mechanism (Jorgensen, *Trends Biotechnol.* 8:340344 (1990), the entirety of which is herein incorporated by reference; Meins and Kunz, In: *Gene Inactivation and Homologous Recombination in Plants* (Paszkowski, J., ed.), pp. 335-348. Kluwer Academic, Netherlands (1994), the entirety of which is herein incorporated by reference).

It is understood that one or more of the nucleic acids of the present invention including those comprising SEQ ID NO:1 through SEQ ID NO:57264 or complement thereof or fragments of either or other nucleic acid molecules of the present invention may be introduced into a plant cell and transcribed using an appropriate promoter with such transcription resulting in the co-suppression of an endogenous protein.

Antisense approaches are a way of preventing or reducing gene function by targeting the genetic material (Mol *et al.*, *FEBS Lett.* 268: 427-430 (1990), the entirety of which is herein incorporated by reference). The objective of the antisense approach is to use a sequence complementary to the target gene to block its expression and create a mutant cell line or organism in which the level of a single chosen protein is selectively reduced or abolished. Antisense techniques have several advantages over other 'reverse genetic' approaches. The site of inactivation and its developmental effect can be manipulated by the choice of promoter for antisense genes or by the timing of external

application or microinjection. Antisense can manipulate its specificity by selecting either unique regions of the target gene or regions where it shares homology to other related genes (Hiatt *et al.*, *In Genetic Engineering*, Setlow (ed.), Vol. 11, New York: Plenum 49-63 (1989), the entirety of which is herein incorporated by reference).

5           The principle of regulation by antisense RNA is that RNA that is complementary to the target mRNA is introduced into cells, resulting in specific RNA:RNA duplexes being formed by base pairing between the antisense substrate and the target mRNA (Green *et al.*, *Annu. Rev. Biochem.* 55: 569-597 (1986), the entirety of which is herein incorporated by reference). Under one embodiment, the process involves the introduction  
10 and expression of an antisense gene sequence. Such a sequence is one in which part or all of the normal gene sequences are placed under a promoter in inverted orientation so that the 'wrong' or complementary strand is transcribed into a noncoding antisense RNA that hybridizes with the target mRNA and interferes with its expression (Takayama and Inouye, *Crit. Rev. Biochem. Mol. Biol.* 25: 155-184 (1990), the entirety of which is herein  
15 incorporated by reference). An antisense vector is constructed by standard procedures and introduced into cells by transformation, transfection, electroporation, microinjection, or by infection, etc. The type of transformation and choice of vector will determine whether expression is transient or stable. The promoter used for the antisense gene may influence the level, timing, tissue, specificity, or inducibility of the antisense inhibition.

20           It is understood that protein synthesis activity in a plant cell may be reduced or depressed by growing a transformed plant cell containing a nucleic acid molecule whose non-transcribed strand encodes a protein or fragment thereof.

          Antibodies have been expressed in plants (Hiatt *et al.*, *Nature* 342:76-78 (1989), the entirety of which is herein incorporated by reference; Conrad and Fielder, *Plant Mol.*  
25 *Biol.* 26: 1023-1030 (1994), the entirety of which is herein incorporated by reference). Cytoplasmic expression of a scFv (single-chain Fv antibodies) has been reported to delay infection by artichoke mottled crinkle virus. Transgenic plants that express antibodies

directed against endogenous proteins may exhibit a physiological effect (Philips *et al.*, *EMBO J.* 16: 4489-4496 (1997), the entirety of which is herein incorporated by reference; Marion-Poll, *Trends in Plant Science* 2: 447-448 (1997), the entirety of which is herein incorporated by reference). For example, expressed anti-abscisic antibodies reportedly  
 5 result in a general perturbation of seed development (Philips *et al.*, *EMBO J.* 16: 4489-4496 (1997)).

Antibodies that are catalytic may also be expressed in plants (abzymes). The principle behind abzymes is that since antibodies may be raised against many molecules, this recognition ability can be directed toward generating antibodies that bind transition  
 10 states to force a chemical reaction forward (Persidas, *Nature Biotechnology* 15:1313-1315 (1997), the entirety of which is herein incorporated by reference; Baca *et al.*, *Ann. Rev. Biophys. Biomol. Struct.* 26:461-493 (1997), the entirety of which is herein incorporated by reference). The catalytic abilities of abzymes may be enhanced by site directed mutagenesis. Examples of abzymes are, for example, set forth in U.S. Patent No:  
 15 5,658,753; U.S. Patent No. 5,632,990; U.S. Patent No. 5,631,137; U.S. Patent 5,602,015; U.S. Patent No. 5,559,538; U.S. Patent No. 5,576,174; U.S. Patent No. 5,500,358; U.S. Patent 5,318,897; U.S. Patent No. 5,298,409; U.S. Patent No. 5,258,289 and U.S. Patent No. 5,194,585, all of which are herein incorporated in their entirety.

It is understood that any of the antibodies of the present invention may be  
 20 expressed in plants and that such expression can result in a physiological effect. It is also understood that any of the expressed antibodies may be catalytic.

In addition to the above discussed procedures, practitioners are familiar with the standard resource materials which describe specific conditions and procedures for the construction, manipulation and isolation of macromolecules (e.g., DNA molecules,  
 25 plasmids, etc.), generation of recombinant organisms and the screening and isolating of clones, (see for example, Sambrook *et al.*, *Molecular Cloning: A Laboratory Manual*, Cold Spring Harbor Press (1989); Mailga *et al.*, *Methods in Plant Molecular Biology*,



Cold Spring Harbor Press (1995), the entirety of which is herein incorporated by reference; Birren *et al.*, *Genome Analysis: Analyzing DNA*, 1, Cold Spring Harbor, New York, the entirety of which is herein incorporated by reference).

The nucleotide sequence provided in SEQ ID NO:1, through SEQ ID NO:57264  
 5 or fragment thereof, or complement thereof, or a nucleotide sequence at least 90% identical, preferably 95%, identical even more preferably 99% or 100% identical to the sequence provided in SEQ ID NO:1 through SEQ ID NO:57264 or fragment thereof, or complement thereof, can be “provided” in a variety of mediums to facilitate use fragment thereof. Such a medium can also provide a subset thereof in a form that allows a skilled  
 10 artisan to examine the sequences.

In one application of this embodiment, a nucleotide sequence of the present invention can be recorded on computer readable media. As used herein, “computer readable media” refers to any medium that can be read and accessed directly by a computer. Such media include, but are not limited to: magnetic storage media, such as  
 15 floppy discs, hard disc, storage medium, and magnetic tape; optical storage media such as CD-ROM; electrical storage media such as RAM and ROM; and hybrids of these categories such as magnetic/optical storage media. A skilled artisan can readily appreciate how any of the presently known computer readable mediums can be used to create a manufacture comprising computer readable medium having recorded thereon a  
 20 nucleotide sequence of the present invention.

As used herein, “recorded” refers to a process for storing information on computer readable medium. A skilled artisan can readily adopt any of the presently known methods for recording information on computer readable medium to generate media comprising the nucleotide sequence information of the present invention. A variety of  
 25 data storage structures are available to a skilled artisan for creating a computer readable medium having recorded thereon a nucleotide sequence of the present invention. The choice of the data storage structure will generally be based on the means chosen to access

the stored information. In addition, a variety of data processor programs and formats can be used to store the nucleotide sequence information of the present invention on computer readable medium. The sequence information can be represented in a word processing text file, formatted in commercially-available software such as WordPerfect and

5 Microsoft Word, or represented in the form of an ASCII file, stored in a database application, such as DB2, Sybase, Oracle, or the like. A skilled artisan can readily adapt any number of data processor structuring formats (e.g. text file or database) in order to obtain computer readable medium having recorded thereon the nucleotide sequence information of the present invention.

10 By providing one or more of nucleotide sequences of the present invention, a skilled artisan can routinely access the sequence information for a variety of purposes. Computer software is publicly available which allows a skilled artisan to access sequence information provided in a computer readable medium. The examples which follow demonstrate how software which implements the BLAST (Altschul *et al.*, *J. Mol. Biol.*  
 15 215:403-410 (1990)) and BLAZE (Brutlag *et al.*, *Comp. Chem.* 17:203-207 (1993), the entirety of which is herein incorporated by reference) search algorithms on a Sybase system can be used to identify open reading frames (ORFs) within the genome that contain homology to ORFs or proteins from other organisms. Such ORFs are protein-encoding fragments within the sequences of the present invention and are useful in  
 20 producing commercially important proteins such as enzymes used in amino acid biosynthesis, metabolism, transcription, translation, RNA processing, nucleic acid and a protein degradation, protein modification, and DNA replication, restriction, modification, recombination, and repair.

The present invention further provides systems, particularly computer-based  
 25 systems, which contain the sequence information described herein. Such systems are designed to identify commercially important fragments of the nucleic acid molecule of the present invention. As used herein, "a computer-based system" refers to the hardware

means, software means, and data storage means used to analyze the nucleotide sequence information of the present invention. The minimum hardware means of the computer-based systems of the present invention comprises a central processing unit (CPU), input means, output means, and data storage means. A skilled artisan can readily appreciate  
 5 that any one of the currently available computer-based system are suitable for use in the present invention.

As indicated above, the computer-based systems of the present invention comprise a data storage means having stored therein a nucleotide sequence of the present invention and the necessary hardware means and software means for supporting and  
 10 implementing a search means. As used herein, "data storage means" refers to memory that can store nucleotide sequence information of the present invention, or a memory access means which can access manufactures having recorded thereon the nucleotide sequence information of the present invention. As used herein, "search means" refers to one or more programs which are implemented on the computer-based system to compare  
 15 a target sequence or target structural motif with the sequence information stored within the data storage means. Search means are used to identify fragments or regions of the sequence of the present invention that match a particular target sequence or target motif. A variety of known algorithms are disclosed publicly and a variety of commercially available software for conducting search means are available and can be used in the  
 20 computer-based systems of the present invention. Examples of such software include, but are not limited to, MacPattern (EMBL), BLASTIN and BLASTIX (NCBIA). One of the available algorithms or implementing software packages for conducting homology searches can be adapted for use in the present computer-based systems.

The most preferred sequence length of a target sequence is from about 10 to 100  
 25 amino acids or from about 30 to 300 nucleotide residues. However, it is well recognized that during searches for commercially important fragments of the nucleic acid molecules

of the present invention, such as sequence fragments involved in gene expression and protein processing, may be of shorter length.

As used herein, “a target structural motif,” or “target motif,” refers to any rationally selected sequence or combination of sequences in which the sequences or  
 5 sequence(s) are chosen based on a three-dimensional configuration which is formed upon the folding of the target motif. There are a variety of target motifs known in the art. Protein target motifs include, but are not limited to, enzymatic active sites and signal sequences. Nucleic acid target motifs include, but are not limited to, promoter sequences, cis elements, hairpin structures and inducible expression elements (protein binding  
 10 sequences).

Thus, the present invention further provides an input means for receiving a target sequence, a data storage means for storing the target sequences of the present invention sequence identified using a search means as described above, and an output means for outputting the identified homologous sequences. A variety of structural formats for the  
 15 input and output means can be used to input and output information in the computer-based systems of the present invention. A preferred format for an output means ranks fragments of the sequence of the present invention by varying degrees of homology to the target sequence or target motif. Such presentation provides a skilled artisan with a ranking of sequences which contain various amounts of the target sequence or target  
 20 motif and identifies the degree of homology contained in the identified fragment.

A variety of comparing means can be used to compare a target sequence or target motif with the data storage means to identify sequence fragments sequence of the present invention. For example, implementing software which implement the BLAST and BLAZE algorithms (Altschul *et al.*, *J. Mol. Biol.* 215:403-410 (1990)) can be used to  
 25 identify open frames within the nucleic acid molecules of the present invention. A skilled artisan can readily recognize that any one of the publicly available homology search programs can be used as the search means for the computer-based systems of the present

invention. Having now generally described the invention, the same will be more readily understood through reference to the following examples which are provided by way of illustration, and are not intended to be limiting of the present invention, unless specified.

5

### Example 1

The cDNA library of the present invention designated LIB143, is prepared from *Zea mays* genotype DK604 (DEKALB, Dekalb, IL) 3 cm immature ear (megaspore) tissue. This library is prepared from seeds that are planted on a moist filter paper on a covered tray that is kept on the dark for 1 day until germination. The trays along with the moist filter paper, are moved to the bench top at 15hr daytime/9hr nighttime cycles and grown until they are 2 days post germination. The daytime temperature is -80 °F and the nighttime temperature is -70°F. Tissue is collected when the seedlings are 2 days old. At this stage, the coleorhiza has pushed through the seed coat and the primary root (the radicle) has just pierced the coleorhiza and is barely visible; the coleoptile has recently emerged from the seed coat. The seedlings are placed at 42 °C for 1 hour. After 1 hour heat shock, the seedlings are then immersed in liquid nitrogen and then crushed. The harvested tissue was then stored at -80°C until preparation of total RNA. SEQ ID NO: 1 through SEQ ID NO: 350 are from LIB143.

The cDNA library of the present invention designated LIB148, is prepared from *Zea mays*, genotype DK604 (DEKALB, Dekalb, IL) mature pollen. This library is prepared from seeds that are planted at a depth of approximately 3 cm in soil 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same. Plants are watered daily before transplantation and ~3 times a week after transplanting. Peters 15-16-17 fertilizer is applied about 3X per week after transplanting, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplanting to flowering, a total of -900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr day/9hr night cycles.

The daytime temperature is 80 °F and the night temperature was 70 °F. Lighting is provided by 1000 W sodium vapor lamps. When the corn plant is beyond the V10 stage, ear shoots, which are ready for fertilization, are enclosed in a paper bag before silk emergence to withhold the pollen. 21 days after pollination, prior to pulling the ears out, the paper bag is shaken to collect the pollen. At this stage the pollen is mature pollen. The mature pollen is then immediately frozen in liquid nitrogen and then stored at -80C until RNA preparation. SEQ ID NO: 351 through SEQ ID NO: 5745 are from LIB148.

The cDNA library of the present invention designated LIB189, is prepared from *Zea mays* genotype RX601 (Asgrow, Des Moines, IA). This library is prepared from tissue harvested from field grown plants at Asgrow research stations. Leaves are harvested at anthesis from open pollinated plants in a field (multiple row) setting. The ear leaf from 10-12 plants is harvested and pooled and frozen in liquid nitrogen and then subsequently frozen at -80°C where they are stored until RNA preparation. SEQ ID NO: 5746 through SEQ ID NO: 8666 are from LIB189.

The cDNA library of the present invention designated LIB3059, is prepared from *Zea mays*, genotype RX601 (Asgrow, Des Moines, IA) pooled kernel tissue. The library is prepared from pooled kernel hybrid material that is harvested from field grown material at Asgrow research stations. Kernels at 12-15 DAP are sampled. Whole kernels from hand pollinated (controlled pollination) plants are harvested as whole ears and quickly frozen on dry ice. Kernels from each of 10-12 ears from each location are pooled and ground together in liquid nitrogen and then frozen at -80C until RNA preparation. SEQ ID NO: 8667 through SEQ ID NO: 13525 are from LIB3059.

The cDNA library of the present invention designated LIB3060, is prepared from *Zea mays* genotype DK604 (DEKALB, Dekalb, IL) senescing leaves. Corn seeds are planted at a depth of approximately 3 cm in soil into 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same growing media. Plants are watered daily before transplantation and

*ca.* three times a week after transplantation. Peters 15-16-17 fertilizer is applied ~ 3X per week after transplantation, at a strength of 150 ppm N, two to three times during the life time of the plant; from transplantation to flowering, a total of ~ 900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr daytime/9hr night-time cycles.

- 5 The daytime temperature is 80 °F and the nighttime temperature is 70°F. Lighting is provided by 1000 W sodium vapor lamps. Tissue is collected from mature corn plants at 40 days after pollination (40DAP). The leaves are collected at the position of two leaves below the ear leaf and this sample represents those genes expressed during onset and early stages of leaf senescence. The leaves are pooled and then immediately transferred to
- 10 liquid nitrogen container in which the pooled leaves are then crushed. The harvested tissues is then stored at -80 °C until preparation of total RNA. SEQ ID NO: 13526 through SEQ ID NO: 17429 are from LIB3060.

- The cDNA library of the present invention designated LIB3062, is prepared from *Zea mays* genotype H99 (Monsanto Corp. St. Louis, MO). This library is prepared
- 15 from tissue harvested from plants grown in a greenhouse. Corn ears are harvested from 8 weeks old plants. The husk is separated and frozen into liquid nitrogen and then stored at -80°C until RNA preparation. SEQ ID NO: 17430 through SEQ ID NO: 21965 are from LIB3062.

- The cDNA library of the present invention designated LIB3066, is prepared
- 20 from *Zea mays*, genotype H99 (Monsanto Corp. St. Louis, MO), immature anther tissue. Corn seeds are planted at a depth of approximately 3 cm in soil into 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same growing media. Plants are watered daily before transplantation and *ca.* three times a week after transplantation. Peters 15-16-17 fertilizer
- 25 is applied ~ 3X per week after transplantation, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplantation to flowering, a total of ~ 900 mg Fe is added to each pot. Corn plants are grown in a green house in 15hr daytime/9hr night-

time cycles. The daytime temperature is 80 °F and the night time temperature is 70°F. Lighting is provided by 1000 W sodium vapor lamps. Developing anthers are dissected from 7 weeks old tassel. At this stage, which is prior to anthesis, immature anthers are green and still enclosed in the staminate spikelet. After dissection, the anthers are immediately frozen in liquid nitrogen and then stored at -80 °C until preparation of total RNA. SEQ ID NO: 21966 through SEQ ID NO: 26876 are from LIB3066.

The cDNA library of the present invention designated LIB3067, is prepared from *Zea mays*, genotype M017 (Illinois Foundation Seeds, Champaign, IL) kernel tissue. This library is prepared from seeds that are planted at a depth of approximately 3 cm in soil 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same. Plants are watered daily before transplantation and ~3 times a week after transplanting. Peters 15-16-17 fertilizer is applied about 3X per week after transplanting, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplanting to flowering, a total of -900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr day/9hr night cycles. The daytime temperature is 80 °F and the night temperature was 70 °F. Lighting is provided by 1000 W sodium vapor lamps. When the corn plant is beyond the V10 stage, ear shoots, which are ready for fertilization, are enclosed in a paper bag before silk emergence to withhold the pollen. 5-8 days after controlled pollination, the ears are pulled out and then the kernels are plucked out of the ears. The harvested kernels are then immediately frozen in liquid nitrogen and then stored at -80°C until RNA preparation. This sample represents genes expressed early in kernel development, during periods of cell division, amyloplast biogenesis and early carbon flow across material to filial tissue. SEQ ID NO: 26877 through SEQ ID NO: 31387 are from LIB3067.

The cDNA library of the present invention designated LIB3068, is prepared from *Zea mays*, genotype M017 (Illinois Foundation Seeds, Champaign, IL) pollen germinating on H99 silks (Monsanto Corp., St. Louis, MO). This library is prepared



from seeds that are planted at a depth of approximately 3 cm in soil 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same. Plants are watered daily before transplantation and ~3 times a week after transplanting. Peters 15-16-17 fertilizer is applied about 3X per week after transplanting, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplanting to flowering, a total of ~900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr day/9hr night cycles. The daytime temperature is 80 °F and the night temperature was 70 °F. Lighting is provided by 1000 W sodium vapor lamps. When the corn plant is beyond the V10 stage and the ear shoots which are ready for fertilization are at the silk emergence stage, the emerging silks are pollinated with an excess amount of pollen under controlled pollination conditions in the green house. 18 hours after pollination, the silks are removed from the ears and frozen on dry ice. The silks are then immediately frozen in liquid nitrogen and then stored at -80°C until RNA preparation. SEQ ID NO: 31388 through SEQ ID NO: 34965 are from LIB3068.

The cDNA library of the present invention designated LIB3069, is prepared from *Zea mays*, genotype H99 (Monsanto Corp., St. Louis, MO), ears harvested 18 hours after pollination with an excess of genotype MO17 (Illinois Foundation Seeds, Champaign, IL) pollen. Corn seeds are planted at a depth of approximately 3 cm in soil into 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same growing media. Plants are watered daily before transplantation and *ca.* three times a week after transplantation. Peters 15-16-17 fertilizer is applied ~ 3X per week after transplantation, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplantation to flowering, a total of ~ 900 mg Fe is added to each pot. Corn plants are grown in a green house in 15hr daytime/9hr night-time cycles. The daytime temperature is 80 °F and the night time temperature is 70°F. Lighting is provided by 1000 W sodium vapor lamps. When the

genotype H99 corn plant is beyond the V10 stage and ear shoots which are ready for fertilization are at the silk emergence stage, the immature ears are pollinated with an excess of genotype MO17 pollen under controlled pollination conditions in the greenhouse. Eighteen hours after pollination, the ears are removed and frozen in liquid nitrogen and then stored at -80 °C until preparation of total RNA. SEQ ID NO: 34966 through SEQ ID NO: 39602 are from LIB3069.

The cDNA library of the present invention designated LIB3075, is prepared from microspores which are harvested from *Zea mays*, genotype H99 (Monsanto Corp., St. Louis, MO) plants. Seeds are planted at a depth of approximately 3 cm in soil 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same. Plants are watered daily before transplantation and ~3 times a week after transplanting. Peters 15-16-17 fertilizer is applied about 3X per week after transplanting, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplanting to flowering, a total of -900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr day/9hr night cycles. The daytime temperature is 80 °F and the night temperature was 70 °F. Lighting is provided by 1000 W sodium vapor lamps. Microspores are from immature anthers that are dissected from 7 week old tassels. The tassels are cut using a scalpel blade on a glass slide covered with water. Microspores are released in the water and then recovered by centrifugation. The microspore suspension is immediately frozen in liquid nitrogen and stored at -80°C until RNA preparation. SEQ ID NO: 39603 through SEQ ID NO: 43298 are from LIB3075.

The cDNA library of the present invention designated LIB3076, is prepared from *Zea mays* genotype H99 (Illinois Foundation Seeds, Champaign, IL) 3 cm immature ear (megaspore) tissue. This library is prepared from seeds that are planted at a depth of approximately 3 cm in soil 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same. Plants are

watered daily before transplantation and ~3 times a week after transplanting. Peters 15-16-17 fertilizer is applied about 3X per week after transplanting, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplanting to flowering, a total of -900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr

5 day/9hr night cycles. The daytime temperature is 80 °F and the night temperature was 70 °F. Lighting is provided by 1000 W sodium vapor lamps. Ears are harvested from 7 week old plants and are approximately 2.5-3 cm long. Kernels are dissected away from cob, frozen in liquid nitrogen and stored at -80°C until preparation of RNA. SEQ ID NO: 43299 through SEQ ID NO: 46078 are from LIB3076.

10 The cDNA library of the present invention designated LIB3078, is prepared from *Zea mays*, genotype RX601 (Asgrow, Des Moines, IA), shoots harvested at 10 days after planting from plants which are grown in a greenhouse in a high CO<sub>2</sub> environment (~1000 ppm CO<sub>2</sub>). Corn seeds are sterilized for 1 minute in a 10% Clorox solution, rolled in germination papers, and germinated in a 0.5 mM calcium sulfate solution for two days

15 at 30 °C. The seedlings are transplanted into a peat mix media in 3" peat pots at the rate of three seedlings per pot.. They are then placed in the greenhouse. Twenty pots are placed into a high CO<sub>2</sub> environment (~1000 ppm CO<sub>2</sub>). The plants are hand-watered and lightly fertilized with Peters 20-20-20 liquid fertilizer. At 10 days after planting, the shoots are collected, placed in liquid nitrogen, and lightly ground by hand. The shoot

20 tissue is then stored at -80 °C until preparation of total RNA. SEQ ID NO: 46079 through SEQ ID NO: 50197 are from LIB3078.

The cDNA library of the present invention designated LIB3079, is prepared from *Zea mays*, genotype M017 (Illinois Foundation Seed, Champaign, IL) dissected kernels including the basal endosperm transfer region tissue. This library is prepared

25 from seeds that are planted at a depth of approximately 3 cm in soil 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same. Plants are watered daily before transplantation and ~3

times a week after transplanting. Peters 15-16-17 fertilizer is applied about 3X per week after transplanting, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplanting to flowering, a total of -900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr day/9hr night cycles. The daytime

5 temperature is 80 °F and the night temperature the night temperature was 70 °F.

Lighting is provided by 1000 W sodium vapor lamps. When plants are beyond the V10 stage, ear shoots, which are ready for fertilization, are enclosed in a paper bag before silk emergence to withhold the pollen. Kernels are harvested at 12 days after pollination and placed on wet ice for dissection. Kernels are cross sectioned laterally, dissecting just

10 above the pedicel region, including 1-2 mm of the lower endosperm and the basal endosperm transfer region. This pedicel and lower endosperm region containing the basal endosperm transfer layer is collected and frozen in liquid nitrogen. The tissue is then transferred to -80 °C until RNA preparation. SEQ ID NO: 50198 through SEQ ID NO: 54477 are from LIB3079.

15 The cDNA library of the present invention designated LIB3088, is prepared from *Zea mays* genotype H99 (Monsanto Corp., St. Louis, MO). This library is prepared from seeds that are planted at a depth of approximately 3 cm in soil 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same. Plants are watered daily before transplantation and ~3

20 times a week after transplanting. Peters 15-16-17 fertilizer is applied about 3X per week after transplanting, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplanting to flowering, a total of -900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr day/9hr night cycles. The daytime temperature is 80 °F and the night temperature the night temperature was 70 °F. Lighting is provided by

25 1000 W sodium vapor lamps. Ears are harvested from 8 week old plants and are approximately 3.5-4.5 cm long. Kernels are dissected away from cob, frozen in liquid nitrogen and stored at -80°C until preparation of RNA. SEQ ID NO: 54478 through SEQ

ID NO: 57264 are from LIB3088.

Construction of plant cDNA libraries is well-known in the art and a number of cloning strategies exist. A number of cDNA library construction kits are commercially available. The Superscript™ Plasmid System for cDNA synthesis and Plasmid Cloning (Gibco BRL, Life Technologies, Gaithersburg, Maryland U.S.A.) is used, following the conditions suggested by the manufacturer.

### Example 2

The cDNA libraries are plated on LB agar containing the appropriate antibiotics for selection and incubated at 37° for a sufficient time to allow the growth of individual colonies. Single colonies are individually placed in each well of a 96-well microtiter plates containing LB liquid including the selective antibiotics. The plates are incubated overnight at approximately 37°C with gentle shaking to promote growth of the cultures. The plasmid DNA is isolated from each clone using Qiaprep plasmid isolation kits, using the conditions recommended by the manufacturer (Qiagen Inc., Santa Clara, California U.S.A.).

The template plasmid DNA clones are used for subsequent sequencing. For sequencing the cDNA libraries of LIB143, LIB148, LIB189, LIB3059, LIB3060, LIB3062, LIB3066, LIB3067, LIB3068, LIB3069, LIB3075, LIB3076, LIB3078, LIB3079, and LIB3088, a commercially available sequencing kit, such as the ABI PRISM dRhodamine Terminator Cycle Sequencing Ready Reaction Kit with AmpliTaq® DNA Polymerase, FS, is used under the conditions recommended by the manufacturer (PE Applied Biosystems, Foster City, CA). The ESTs of the present invention are generated by sequencing initiated from the 5' end of each cDNA clone.

A number of sequencing techniques are known in the art, including fluorescence-based sequencing methodologies. These methods have the detection, automation and instrumentation capability necessary for the analysis of large volumes of sequence data.

Currently, the 377 DNA Sequencer (Perkin-Elmer Corp., Applied Biosystems Div., Foster City, CA) allows the most rapid electrophoresis and data collection. With these types of automated systems, fluorescent dye-labeled sequence reaction products are detected and data entered directly into the computer, producing a chromatogram that is subsequently viewed, stored, and analyzed using the corresponding software programs.

5 These methods are known to those of skill in the art and have been described and reviewed (Birren *et al.*, *Genome Analysis: Analyzing DNA*,<sup>1</sup> Cold Spring Harbor, New York, the entirety of which is herein incorporated by reference).

We claim:

1. A substantially purified nucleic acid molecule that encodes a maize protein or fragment thereof comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 5746 through SEQ ID NO: 8666.4.

5 2. A substantially purified maize protein or fragment thereof, wherein said maize protein is encoded by a nucleic acid molecule that comprises a nucleic acid sequence selected from the group consisting of SEQ ID NO: 5746 through SEQ ID NO: 8666 .

3. A transformed plant having a nucleic acid molecule which comprises:

- 10 (a) an exogenous promoter region which functions in a plant cell to cause the production of a mRNA molecule;
- (b) a structural nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 5746 through SEQ ID NO: 8666 or complements thereof;
- 15 (c) a 3' non-translated sequence that functions in said plant cell to cause termination of transcription and addition of polyadenylated ribonucleotides to a 3' end of said mRNA molecule.

4. The transformed plant according to claim 3, wherein said structural nucleic acid molecule is a complement of any of the nucleic acid sequences of SEQ ID NO: 5746 through SEQ ID NO: 8666.

20

5. The transformed plant according to claim 4, wherein said plant is maize or soybean.

6. The transformed plant according to claim 4, wherein said plant is maize.

7. The transformed plant according to claim 4, wherein said plant is soybean.

**Abstract**

Expressed Sequence Tags (ESTs) isolated from maize are disclosed. The ESTs provide a unique molecular tool for the targeting and isolation of novel genes for plant protection and improvement. The disclosed ESTs have utility in the development of new strategies for understanding critical plant developmental and metabolic pathways. The disclosed ESTs have particular utility in isolating genes and promoters, identifying and mapping the genes involved in developmental and metabolic pathways, and determining gene function. Sequence homology analyses using the ESTs provided in the present invention, will result in more efficient gene screening for desirable agronomic traits. An expanding database of these select pieces of the plant genomics puzzle will quickly expand the knowledge necessary for subsequent functional validation, a key limitation in current plant biotechnology efforts.



# Combined Declaration and Power of Attorney for Patent Application

Docket Number: 38-21(15454)B

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am an original, first and joint inventor of the subject matter that is claimed and for which a patent is sought on the invention entitled NUCLEIC ACID MOLECULES AND OTHER MOLECULES ASSOCIATED WITH PLANTS, the specification of which is filed herewith unless the following box is checked:

☐ was filed on ;  
as United States Application Number ; and  
was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information that is material to patentability as defined in 37 C.F.R. § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application, which designated at least one country other than the United States listed below, and have also identified below any foreign application for patent or inventor's certificate, or PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Claimed

☐ Yes ☐ No

(Application No.)

(Country)

(Day/Month/Year Filed)

☐ Yes ☐ No

(Application No.)

(Country)

(Day/Month/Year Filed)

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below.

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or under § 365(c) of any PCT international application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information that is material to patentability as defined in 37 C.F.R. § 1.56 that became available between the filing date of the prior application and the national or PCT international filing date of this application.

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Third inventor's signature		Date
Residence		
Citizenship		
Post Office Address		

# Combined Declaration and Power of Attorney for Patent Application

Docket Number: 38-21(15454)B

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Prior Foreign Application(s)

Priority Claimed

☐ Yes ☐ No

(Application No.)

(Country)

(Day/Month/Year Filed)

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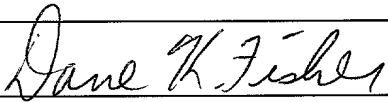
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor	Dane K. Fisher	
Inventor's signature		Date 09/13/99
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Citizenship	USA	
Post Office Address	6504 Sprucefield Drive, O'fallon, Missouri 63366	
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Second inventor's signature		Date
Residence	Clayton, Missouri USA	
Citizenship	India	
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Full name of third inventor		
Third inventor's signature		Date
Residence		
Citizenship		
Post Office Address		

<110> Fisher, Dane K.  
Lalgudi, Raghunath V.

<120> NUCLEIC ACID MOLECULES AND OTHER MOLECULES ASSOCIATED WITH  
PLANTS

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<213> Zea mays

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 cgtattgggc cacatccttt tggcccaatc cgtttcccc caacttatta aattggttgc 180  
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 ctgaacccta gcatactccg gccatctgct gccggcccc gcgatcccc gccatggcct 180  
 cccccgaggg cacaacgtgg gtcttcgact gtcccttat ggacgacctc gcggtcggcg 240  
 ccgacttcgc ggcagcccc gcgggaggat ttttctgggc agcgccgccc tcgctgcagc 300  
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cggcgatcgc gcttggtctt ctaccgcgtc gccgcggcga ggagatgcc accgcagcgc 240  
accgcacgg gctctctcc gagagccgc tcgctctgtc gccggctgct tacgacttct 300  
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 acgtcgggtga ccgcgggtgc ttcgccaggg cctctgggga ctacgccatt gtgattaagc 360  
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 atgagacaac catagacatt gatggtgatt tggttatgga tttgcgagac ccaaggattc 180  
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ttctaaggca tgcattgtct atgtcagaca acgaaggaaa cgatgatgac gc 352

<210> 13  
<211> 402  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-D2

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gttcttgatt tagttgatga tgaagcttct ggtatgcaag cgcagaaaac tcgatatac 180  
tggatgaagg tggacaattg gagctatgtc agctacagtt attgatctgt gttcactttt 240  
gaaatactaa aataggaaag taactataca atgctgctaa cttgacaatc attgcatgaa 300  
agcatcatat gctagtgtc cgtgtttatt gctgccctag ccatccggat agtccatcgc 360  
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cgtagccgtg taggccgccc gccgtgtgcc tgtgtg 396

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aacgctgcat attttttttt gcctaagcta cagctgtgct acagcaaatt ttgattaataa 180

aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240

aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaacaaaaa aaaaaaaaaa aaaaaaaaaac 300

aaaaaaaaa aaaaaaaaaa gggggggggcc cccaaggat tccaacgtta agtaccgcag 360

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<211> 383

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gtgctgatgg tggcccatgg aggagattgt gtgcgctgcc tgcatttttg gttgggctgc 180

tgtacgatga ggaatcatta caaagcattt tagacatgac ttttgactgg acacaggagg 240

aaagagagat gctaagacat aaggtagcgt tgactggctt gaagacacca tttcgcgatg 300

gatatgttag agatttagcc gaggaagttc taaaactggc caagaatgga ttggaaagaa 360

gaggatacaa ggaggtccgt ttc 383

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<223> Clone ID: LIB143-001-Q1-E1-D8

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 aagcaatacg actgttctcg agagaaccga agaattatgg aaattgaggt tatggcttaa 180  
 aaaaaaagag attagaatgc gcagcatgca attaaaaggg cggccgctct agaggatcga 240

<210> 18  
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 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-D9

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 <211> 396  
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<223> Clone ID: LIB143-001-Q1-E1-E1

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 cacgtctgct tccgcgcctc cccgcctcct caccgtccgc ccccttttac ctgcctgac 240  
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acctcgggga attccaacaa caaaaagcat gataagcggc agccaaaatt tataaccagac 360  
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acgaaccctc tattcgagaa gagggcgaag cagttcggca tcggcggcgc gttgccgccc 180

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gagaagaaat atgagccac cattggtgtt gaagttcacc ctctggattt tagcactaac 120

tgtggcaaaa ttcgctttta ttgctgggac actgctgggc aagaaaagtt cgggtggcctt 180

agggatggct actacattca tggtcagtgt gccatcatta tgtttgatgt cacttctagg 240

ctgacataca agaattgtcc gacatggcac agggacctgt gcagggctctg tgagaacatc 300

cccattgttc ttgtggtaa caaggttgat gtcaagaaca ggcaagtcaa ggccaagcaa 360

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<213> Zea mays

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tgacctgacc cacgagggat cgcgagatga agatcattcc ggtecccttg ctggatgaca 180  
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ccacccatca ccactgggat catgctggtg gcaatgagaa gatgaggctg caggt 355

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<223> Clone ID: LIB143-001-Q1-E1-E9

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tgcaatttat ggtgtaattg tggcaatcat cctcc 335

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caaaatgtgg gagaacagca agtttgctga ctatgattca tctaaggaga aggacaatga 180  
tggtgactca caggttgatt tggaatcaaa caagggggat gcaggtcttg acagcaatgg 240  
gttgactca actaaggaga acagtggcag ggcacacca actaaacagc accagcagta 300

taagaagaag cctttgctga agagattcgg tgggtctgcta aaaaagaaaa gcgaaaatta 360  
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<210> 27  
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<223> Clone ID: LIB143-001-Q1-E1-F11

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gaccaccacc agacgcccgc gccgcccgtg gtgggtggaca cgcattgctca ccaccaggag 180  
ggagagcact tcccggcgcc ggcgcctctc ccgcacgtgg agacgcacca ccccgctcgtc 240  
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cacgaacacg aacatcatcg ccggagtttt aaagatgttc ctcatggact ggttcaacgg 180  
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<210> 29  
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<223> Clone ID: LIB143-001-Q1-E1-F5

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<210> 30

<211> 382

<212> DNA

<213> Zea mays

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 ctggaagcag cagcagcagc agcctgttcc cctcgttcgg aggcaccacc agctctgaga 240  
 cgcccgctt cgccggcgct cgcgtcgact ggaaggagac gccggaggcg cacgtgttca 300  
 agaccgacgt gccggggctg aagaaggagg aggtgaaggt ggagctggag gacggcaacg 360  
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<210> 31

<211> 371

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-F7

<400> 31

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 cgggaacgga cttctaactt agagagagcg cgggcgagag aggtcaaccg cagccggagg 180  
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gcacggacta cggccacaag gttgtcgctt tggctaactc tatccccctc gacgacaccg 300  
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 cgaaatgcat g 371

<210> 32  
 <211> 342  
 <212> DNA  
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<223> Clone ID: LIB143-001-Q1-E1-F8

<400> 32

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 cagaatgata ttctgagtc aacccttgat gatgctgtga atttactagg tgactactcg 180  
 acatggttga gttctagcaa taccgcgaa gcaaattgat atttggagt tttctgtgaa 240  
 agatgggatg cactggttgc tccggaagaa agggctctgt tagatccaaa tgggcttgtt 300  
 aatgaagggg agaaactcac cataaaggca ctggaaggct tc 342

<210> 33  
 <211> 175  
 <212> DNA  
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<223> Clone ID: LIB143-001-Q1-E1-F9

<400> 33

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<210> 34  
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 <212> DNA  
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<223> Clone ID: LIB143-001-Q1-E1-G1

<400> 34

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 acaaagacga gaggaagagg ttcccggcgg cgcacgact atgtcgtcga tgatgaacgc 180  
 gctggcgaac tggctggcga acccgccgcg caaccgctg gcgcgcctcc acatgcacgc 240  
 cgtctcctcg cgcctcagga aatacggact gaggtacgac gacctctacg accctactt 300  
 cgatctggac atcaaggaag cgctcggtag gctgcctagg gaggtggtcg acgcccgcac 360  
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<210> 35  
 <211> 346  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-G11

<400> 35

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 gtgggcatcg cgttcgcggt ggtgcagtgg gtgctggtct ccaaggtgcg ggtcaccccc 180  
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 gaggagggac tcaacgacca caacgtcgtc gtcaagtgcg ccgagatcca gaccgccatc 300  
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<210> 36  
 <211> 446  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-G12

<400> 36

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 tggcatccca ctcaactaca ggcacatgga gggctttggt gtcaatacct acaccttgat 180  
 caacagggat ggaaagcctc accttggtgaa attccattgg aagcctactt gtggtgtgaa 240

atgcttgctc gacaatgaag ctgtgactgt tggaggcacc tgccacagcc atgcgacgaa 300  
 ggatctatat gattccatcg cagctgggaa ttaccctgaa tggaagctct acatccagac 360  
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<210> 37  
 <211> 374  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB143-001-Q1-E1-G2  
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 gcagatcggc actctgacaa atacatcaga aaaggacgcc tgaattggcc tgagggttgc 240  
 acctcgcgga agagcatgaa agctgtgatg aaattgtcca ggcttcagaa tctggatgatg 300  
 caaatgtgg accaggctgc gggagatttc attggtcttt tgcaagggtc cctgaagtat 360  
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<210> 38  
 <211> 248  
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 <213> Zea mays  
 <223> Clone ID: LIB143-001-Q1-E1-G4  
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 acccttcgcc ggggatgggc cacctggtct ccatgatcga gcttggcaag atcctcggcg 180  
 cgcggggact gtccgtaata attgtcgtcg tcgagcctcc cttcaacacg ggcgctaccg 240  
 cgcctttc 248

<210> 39  
<211> 359  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-G5

<400> 39

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gtgaggcgca gcaacgtggt cgaccccttc tccatggacc tctgggaccc cttcgacacc 180  
atgttccgct ccacgtccc gtcggcgacc tccaccaact ccgagactgc cgccttcgcc 240  
agcgcccgcg tgcactggaa ggagacgccc gagggcgacg tgttcaaggc cgacctcccc 300  
ggcgtcaaga aggaagaggt caaggtcgag gtcgagggac ggaacatgct ggcatcag 359

<210> 40  
<211> 388  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-G7

<400> 40

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acgcgctcgg ctccctggtc tgtcaccttg cggcggttcc cctccaccta gcatgcccgt 180  
caggccctct cttcgccacc ctgccatgga gctcgtccca tgcccaacgc cggccaacct 240  
cacttcccat ggtcgtccct tcctccttcc tccctatggt cgacggcctc accttccatg 300  
gcttccaaga tctgctcaac atccattcta gcgcgcaccc ctgcttccgt ttctggtgg 360  
ccgacgcccc ctccctggaa ctgcgcc 388

<210> 41  
<211> 425  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-G9

<400> 41

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 gcagacgtcg tctccgaagc taccgcacaa gcagtactcc ttcgtgtcgg actccggaga 180  
 ggagagcgat ccggataagc tgggtggagag cgtcttggac agcctgcaga aagcacgggg 240  
 cggctcgaag ctgcacaact gagcgtctgc tgccatcgaa ttattgtttt tgcaacctaa 300  
 cgagtcgtgc ttatgggtgtt ggccatggct gactgtcaag gacagcggcg cctgcaagca 360  
 tcaacccgaa aaaactgttg attaaacctc gtcttttact tggactaggg cgtagtacaa 420  
 tcgga 425

<210> 42  
 <211> 260  
 <212> DNA  
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 <223> Clone ID: LIB143-001-Q1-E1-H1  
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 tactccacca tccagccaca tgccagggtg gtacacgccca ctcccgccat ctctccactc 180  
 ccagtgcgcg attgtctttt cacatatgga gtagccgggt tcaggctttc ccatgacgag 240  
 gtatgtgccg ctctagagga 260

<210> 43  
 <211> 383  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB143-001-Q1-E1-H10  
 <400> 43

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 tcgatacgct cacgaagatc aggaaccacc gtgggtctgcg tcaactactgg ggctccgtg 180  
 tccgtggaca tcacaccaag accactggca ggcttgaaa aactgttggt gtctccaaga 240



agcgataagc tacatatcta tcgacaaatc tcagatgtac tagtggttggc tcatgttcaa 300  
 actgtcttga ctaacgggtt ctggtgggac agtttcctga aattatgttt tgccctaggg 360  
 taatcttgca gttatggaac ctt 383

<210> 44  
 <211> 354  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-H11

<400> 44

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 gaggaagatg ctgctggcca tgacaagctt cgacgacgac gacgctgccg cctcgccctc 180  
 ggcacccggt catcacgcc atcctcacca gcaccaccag caccaccacc accaccacca 240  
 ccacgcgggc aggcggcgat ggaaccggcg gcaggggacc attccaccac cgtcagatgc 300  
 tggcgaggcc gagggggtcg acccgcgcta cgggtctgcac aagcggcctg gttc 354

<210> 45  
 <211> 231  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-H2

<400> 45

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 tcgggggtctg tcccgggccc atcgtggaac gcaagcccgt attcctgaac ctgggtcaagt 180  
 tcaccacacc tagtggtgat cactaccccc tctcgtttca gggagtcctt a 231

<210> 46  
 <211> 218  
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<223> Clone ID: LIB143-001-Q1-E1-H3

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gagtcgctg agaatgcctt cgctcctac ggctagatcc tcgactccaa ggtcatcacc 180  
gatcgggaca cggcgacgtc tcgcggcttc ggcttcgt 218

<210> 47  
<211> 402  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-H4

<400> 47  
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gccggcgtga agcactggcc accgggtgct gcacgtcaac ggccaacagg gggcaccgtg 180  
caggtgggca gaaacagcca gcgacaacag tagggcacag ggatgtatat ggaccttcca 240  
catacactag acttttgcaa gcaaccaaag atactctcag ataataagtt caatgaatca 300  
aaaggaaaac tgggtgtctga tgagatcatc ataaatctgc tgtcaagacg cctggaagag 360  
ggagaagaaa aggggtgaatt ggggttcac cttgatggct tt 402

<210> 48  
<211> 385  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-H6

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cccatcctcg gagtgaccgt tgcctacaac aaggatccca gcccgtgaa ggtcaacctc 180  
ggggtcggcg cctaccggac cgaggaaggg aagcccctag tgctgaacgt ggtcaggcgc 240  
gccgagcaaa tgttgatcaa taatccgtca cgtgtcaagg agtacctacc aatcaccggt 300

ctggctgaat tcaataagct gagcgctaag cttatctttg gcgctgacag ccctgctatt 360  
caggagaata ggggtgctac cgtgc 385

<210> 49  
<211> 337  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-H7

<400> 49

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ctcgccgaag gcgaaggcca agaccgctgc gaagcccaag gggcgctgc ccaagcccaa 180  
ggccaaggcc aaggccaagg ccaaggccaa gcctgtcgt cctgccgccc cgtcgcccaa 240  
gccccgcggg cgccctccca aggtcgccaa gacctccgcc aagggtccc ccgccaaggc 300  
agccaagaag gccggtgctc ctgccaagaa ggggaag 337

<210> 50  
<211> 384  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-A4

<400> 50

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tggccactgc ctccccgtcg ctccgcttcc tcggcctgct caagcaagcc gacgacgcca 180  
gctcccagtc ccacggtgct caggagctgg agctcgacta gcgcgacgtc gtctggctct 240  
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ccccgagcgc cagcctcggg aggccgattt ccgccacgtc ccggccactt ctccgcccgc 360  
agcatggggc tgtccgcgct cctc 384

<210> 51  
<211> 434

<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-A6

<400> 51

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gggttcgtgc agggcgccgg cgccgaagcc gtgttcgctg atgggtccct gttcagcccg  180
ttcctgttcg gcaagttctt tgaccagcc gaccggtcc cgctgtggga gttcgagccg  240
gacgtgctgc tcgccgcgct gcgccgcggc aacgccagga ccgccgtcga ctgggccgag  300
accgactccg agtactacct cacagcctac gtgccaggtg gaaggagatg cgacgtggag  360
gtgagcgggg acgcgatgaa cgtggtcgac atcagcggcc tctggcgggc gccgccggcg  420
gacggccggg actg                                     434
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<210> 52  
<211> 429  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-A7

<400> 52

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acaagaatcg gtcttgctgg ccttgcggtc atggggcaga accttgccct caacattgca  180
gagaaagggc tcccatctc tgtgtacaac aggacaacct ccaaggtgga cgagaccgtg  240
cagcgtgcca aggcagaagg aaaccttccc gtctacggct tccatgacct cgcgtccttt  300
gtgaactcca ttcagaagcc acgggtggtg atcatgctcg tcaaggccgg cgcgccagtt  360
gaccagacca tcgcgacgct cgcagctcac ttggagcagg gcgactgcat catcgaatgg  420
gggaacgag                                     429
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<210> 53  
<211> 406  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-A8

<400> 53

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gccgcgatgg ggatcctcct cccgtccctc ctgctcgctt cgctcgctct cagttcgctc 180  
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aatgctagcc aacgggatat tcagaaagcc ttccacaaac tttctctaaa ataccaccct 300  
gacaagaata aaggaaaggg cgcacaggaa aaatttgaag aaataaaciaa tgcataatgag 360  
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<210> 54

<211> 269

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-A9

<400> 54

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gacctccgag acttcacccc gttcagcctc gtggacggtc tcgggagcgc gctgtcgag 180  
gtggcggaga ccctgggccc cccgctggag cgctggcgc cgctcgcggt gctgtcccg 240  
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<210> 55

<211> 361

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B10

<400> 55

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cctgacctcc aacggcagcg cccaagccaa acagcttagc ttgctcggtt gccttcttct 180

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<210> 56  
<211> 206  
<212> DNA  
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<223> Clone ID: LIB143-002-Q1-E1-B3

<400> 56

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ataattaata tttgttgact gacgtc 206

<210> 57  
<211> 406  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B4

<400> 57

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ctgcagcgtc cacggatttg ttaggtctcc ccttcttaca agggttcttc gtcgtgtcct 240  
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aggccagtag ctagcttgcc tgcttcataa atcgtgcccg attgtaatgg gcctcttaga 360  
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<210> 58  
<211> 80

<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D7

<400> 58

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<210> 59  
 <211> 446  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D8

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 taccattgtg gctatctcga aggacatagt aaaaccacct gcacaacctg acagttggaa 240  
 gttatttggg cgtgatgact gtcatttttt cttctgggct acgtacaaga ctgacttctt 300  
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<210> 60  
 <211> 439  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D9

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 cagcagacaa gatttcgata gcgacttcat cttcgggtgtt gcattctctg cttaccagat 180  
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gaaaggtgga gccgatttgg gcaatggaga gactacttgt gactcatacc ggacttggca 300  
gaaagatcta gacgtgatgg aagagcttgg agttaaaggc tacagattct cctttgcgtg 360  
gtcaagaatc cttccaagat gaaagaggag taggggaatc aacgaagatg gtattaagta 420  
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<210> 61  
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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-E1

<400> 61

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tcagcagggt ctcacgctga tgtgcggaag cactccggag atgtccttgg gtgtaagtct 120  
gttcgcgcgc tttgactgtc 140

<210> 62  
<211> 72  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-E10

<400> 62

tgagaggcac gctgtctgta cccatgcac acgcgcgggtg tgtgtggtac tcacaccag 60  
agtgctagac at 72

<210> 63  
<211> 427  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-E12

<400> 63

ccacgcatcc gcaatatttg agctactgaa caagatgttg ctttctatgt cacaagagca 60  
gaatagtcog tttctttctg cattaactca agacacccat gtgcttcggg attttcatgg 120  
aaatcgggtct cctgttcctg atccaaaatc caaaggagtg atttatggct tgacacttga 180



tacaagtgag aagcatttag ctcttctata cctagcaaca attcagggta ttgcttatgg 240  
tactcgtcat attgtggagc attgtaatgc tcatggccac aagatagaca cacttcttgc 300  
ttgtggggga cttgcaaaga attctctgta tatccaagag catgcagata ttacaggatg 360  
tcctataata cttcctagag agagcgagtc agtgcatttg ggtgccgctg ttcttggcgc 420  
tggttgct 427

<210> 64  
<211> 406  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-E2

<400> 64

gcgtccgcaa tctcaggtgg gcacacgata ggggtgacgc actgcgacaa gttcgtgcgg 60  
cggctgtacc cgttcaaagg cgccgccgcc ggcacgccga tgaacctcta ctctctgcgg 120  
cagatgccgc ggacgtgccc gctgaactac ggcgcgtctg cgttcgcgat gctggacgcc 180  
gtgacgcccc gcgcgttcga caacggctac taccggacgc tgcagcagat gaagggcctg 240  
ctggcctccg accaggtgct ctctcgtgac cgccgctccc gcgccaccgt caaccgcttc 300  
gccgccaacc ataccgcctt ctctgacgcc ttccccaacg ccatggccaa gctcggccgc 360  
atgtgcgtca ataccgccgc cgacggcgag gtccgccggg tatgca 406

<210> 65  
<211> 438  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-005-Q1-E1-E3

<400> 65

gtccgctaga aaatcggcgt ctctctcncg tccggcactt cctccgacgc actagcctgc 60  
ggcggcgccg gcgccggcga ccagcggcca tgcgggtggc acccaggggtg ctcttctcgc 120  
tccgcgacgc cgccggctac ggcgctgccc tcgccgacgc gctccgcccc ccgccgggc 180  
taacgagggg gtcctcgccc ttcgagctcc cccttgaaa gtacggcctc gacggagaga 240

aggcgtgcgc cgagctcctg agcttttccg attccagtgg ctctccacag gtgaccattt 300  
 ttgttctgcc agactataag ccacctcttg cagcgtgtgt tgtaaagag gtcttggaac 360  
 tgatttcttc tgaagctacc tccactgagc gaactctaata tgcncatac atcacaagat 420  
 cgtcaagcta tcatcatg 438

<210> 66  
 <211> 415  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB143-005-Q1-E1-E4

<400> 66

cgcgctccga acgcatcggc caacccttcg gctttcagga aggcctgata aaaggaacaa 60  
 attccttgaa acaagggccc aaggaacttc aattgcggtc aaaacaaaaa tgcggtcggc 120  
 ccggaaaatg gccccccctg ggggtgcaatc cccccggac ccacggcaaa aaatgcgcaa 180  
 cttcttgagg atgccttcaa tgcaaagtga atcagaagca gcctgcaatc atatcataga 240  
 taaatttttg gtgcagttcc agcctcgcgt agtttatgga tgcagtgat aagtatacag 300  
 gctgccctta tatagttcca tangagatag aaccctagct tatagtagat cattatatgt 360  
 tttatgaatt gtgtaattag gtatctgctt tgcagtgagt ggctatatgg tttat 415

<210> 67  
 <211> 418  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB143-005-Q1-E1-D4

<400> 67

taagccatcc agttttccaa accgcacgtt cccgcacccc ctctcccggc cgtgcccgc 60  
 gggtaatcca attggccggc cggttggtgc gggggcgtcc ttgaaggggc atcaanggag 120  
 aaagggactc aacaacttca tccgcgacgt ccgcgacgaa ggatacttca natgccttct 180  
 ggacgggaac cttttgcaaa cgaaaatcca caatattggc gcaacacttg taggagttga 240  
 caagtttggt aacaaatatt atgagaaact acatgacact cagtatggaa ggcatangtg 300

ggtagaatat gcagagaaag gtcgttaciaa tgcataccaa gtgcctgctg aatggcatgg 360  
atggctgcac cacatcacag atagcaccgg ggataagctg ctgaaccaga agactgct 418

<210> 68  
<211> 404  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-B8

<400> 68

ccacgcgtcc ggatacttcg ctgcctgagg agtccccggc accggagggtc ttgctaccgg 60  
ctggcggctt cttcttccgt tctctcccaa gtctcttcc cggaggaatc atgatcgtct 120  
gcgtcgccgt tgcggccac cagaacaatc cgctgtacct gcagagcttc accggaggcg 180  
acgacgccct caagctccac cacatcgtca actgctctct cgacgtcatc gacgagcgag 240  
tgagcaatcc taagaggagt gcacctacat tgaatgagac atttttgggt cttctatacc 300  
caactgagaa ctacaaagtg tatggctatt tgacaaacac aggggtcaaa tttatcatgg 360  
tcacgactga tcttgatgtc aaagatgcag atgccccgaa tttt 404

<210> 69  
<211> 441  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-B9

<400> 69

acgcatccgc aatcttcaag aaagaagaag caaatagagc acacagtcga gtgtaaacca 60  
tccaaccaat catggcttcg agttccagga gcaccgtgtt ttcacttctt ctcttggtgg 120  
cgctgctgct cagctgcagc ggcatgagca gcgcggcgcg gttgctggaa gaggcgccgc 180  
ccaaggagga gcacccacat cctgccgtgc cggagctgcc agaacctgag ctgccgccgc 240  
accctaccga cgtcgtgccg cctgagctgc ccaaaccga gttaccaccg caccggccgc 300  
ttgtccccga gctgccgaag cctgaggtgc ctcatcaggt gccggagcag ccgaagcccc 360  
agctgccacc gcacccgaca gccgtccctg agctcccgaa acctgaggtg ccgcacccag 420  
tgccggagct gcccaagccc g 441

<210> 70  
 <211> 248  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-005-Q1-E1-C10  
  
 <400> 70  
  
 ccactcacgc aaccggaaat ctctatgggt tcttccatgt gatcatactc ttgatagcga 60  
 tgatgcaact gacctggcta ctatagtttt ctatggatgg ttcattcggc ctcttacata 120  
 aggtatcgat tcagacatca tgctggaaga tgttgggtgat cggcttctac agttcactga 180  
 aacataggcc gcacttgtca ctggtcacat attatattttc ttggtggcat gtattacgtc 240  
 agtcaggt 248

<210> 71  
 <211> 431  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-005-Q1-E1-C12  
  
 <400> 71  
  
 acacgcatcc ggagtgtttg tccatacgca ttggtctgaa tactgtagct actagcgcga 60  
 gtgccactgt gccgcagctg cctgctcgcc attactgcaa gctgtgttca atcaaagctt 120  
 aattaggctc cctctacatc tgatccagct aagtagctag ccagcactac agaagggcgt 180  
 ggcaagaatc aggagagaga tagcaggggg gctagctagc tgagctcgtg cgacgaagaa 240  
 tggccggaat tggcaggaac atggtggcgc cgctcctggt gctcaacctc atcatgtaca 300  
 tcatcgatc cggttcgcg agctggaacc tgaaccactt catcaacggg cagaccaact 360  
 accccggcgt ggccggcaac ggcgcgacgt tctacttcct ggtgttcgcc atcctggccg 420  
 gcgtggtggg c 431

<210> 72  
 <211> 252  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-005-Q1-E1-C3

<400> 72

gctcctgctg gtgccgatgc tgaggctgct gctcctgctg gtcccgatgt gactcacatg 60  
gccgctcatg acgcacccgc cgatgatgat gctgctgctg ctcgctcctgc tgggtgcagat 120  
gagcccgccg cggtcgagcc ggtcgccgag gttcaggctg ctgctcacga agaactcgcc 180  
gctgacgagc cgtgacgctc ctgctcatgc tggtcaccaa gagccctccg gttcaggcaa 240  
gtgacgttgc tg 252

<210> 73

<211> 439

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-005-Q1-E1-C8

<400> 73

ccacgcgacc ggatagagggc cgaccaactt tgacgtggac agaggctgtg aagagagacc 60  
tgaaggagtg gaatattgat aaagagctcg ccgcagatag gaaggggtgg aagtgtgcaa 120  
ttcaggtgcc agaaccctga ttgatagttt cgcttttctt ccttaatcgt ttgacctttt 180  
cttgtgtcca ttttagatct tgctggtcct tgtgggtttt atctctttta tgtgtttccc 240  
cgtttcgttg ttttcggttc tcctttgcct ttgtttccct tttctgttct ttgggggttg 300  
agctctgagg ttttcatacg gggtttcac tctagcctac cccaacgtgc ttgggacaaa 360  
aaggctttgt tgttgttgtt gttgttgttg ttgcatgaca cacttgagaa tgaatgtgtt 420  
tctttctgtn tgctggtat 439

<210> 74

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-C9

<400> 74

cccacgcac cggaaatcta tatggtttct tccatttgat cagagtctcg agagcaatga 60  
tgcaactgac cgggctaataa tatttttcca tggatggatc atgcggcctc taacagaagg 120  
tgtatattca gacatcatga gggaagatgt tggatgtagg cttccagatt tcaactgaaac 180

atatgccgca cttgtccatg gttcatatta tcttcttggc ctcagactat tacgtcactc 240  
 attacgccc ttagaatcat acgattgtgc cttcggacgt atacactgcc ttgatggact 300  
 cacgcataac tctcacatca aattatgtat ctggtcattc tcctgggtcca ccgttcattg 360  
 cacctagtta ctagtccca aaaagcattt actacgtaat ggattacttc agaatacatt 420  
 acggtgaccc tttaatatat gtcac 445

<210> 75  
 <211> 296  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D1

<400> 75

cgcgtccgga agtgaactgg tgccgtgggc cacattcatc aggacggatg agacctgctg 60  
 tcgtgcgtat gcgagcgtcg ataatacagg tgcttgggaa tagagcgata tcaatccagc 120  
 tacgacgcta ctttcatct ttctgttct gcttcgggtcc actattttgt cttccatgat 180  
 cttacatcgt aggtcgttgc aggtggcgcc aaagactttg gtgtaatcgt tgatctgtct 240  
 ggaactggtc ctatcgtcgg acgtacgaga tttttgggtga tccaagggtga acctga 296

<210> 76  
 <211> 236  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D10

<400> 76

ttgcagacct gagggagag attacttgcg aacgagaacg ttccactcag atgtacgcag 60  
 agagatcgtt tcagcagga ggatttcgag agcgacttca tcttctgtgt tgcacgtct 120  
 gcttaccaga tcgaccgtgg cagaggtcgt ggacttaacg tttgggatgg gttcactcac 180  
 cgatacgcac agaaggggtg agctgagttg ggcaatggcg agaggaattg tgactc 236

<210> 77  
 <211> 422  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D11

<400> 77

ccacgcaccc gcaaaaactt gctcggcaaa ttcaggatgt tcttgcaactg tgtagtggca 60  
gtttaccatc ttggtgttat cagctgacga aagcttgccc ttttctgttt cttttcgaaa 120  
cacgaaggca atacttctat tccacagctt ttgggttgct tcgtgcactt catcgtcttc 180  
agcaacaacc gggcaatgat aataaactg cttttgaaag agaagtcagg attggtagat 240  
tgcaacgccca gaaagtccgt gtttctcgta accgtatctt ggattctgca gctaaagtta 300  
tgagatgtt ctctaataa aaggctgtcc tagaagtga atactttggt gaagttggaa 360  
ctggtcttgg tccaactttg gagttttata ctctcttaag ccgtgagctg caaaggggtg 420  
ac 422

<210> 78

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-B6

<400> 78

ccacgcgtac gcacactgag acccgagatt aacgtctcag ctgaagcgcg cggcgccggtc 60  
gaccgtgtcg gcaatgccgg ggcgcaccgt ggcggccggc gagacgcccg tgctgatgag 120  
cggcgccagg cagcagcga tggcgatggc caggctcacc aagatcggga tgctgttcgt 180  
gcggtgccgc ggcggcatca gccactgcc ggaggagtcg gtgatggaca acgacgtgtg 240  
ggccgcgggg ctgcgcgtgt tcaacttcat cgaccagaac gcggtgtcag aagaactgga 300  
tgccgggcag aacgtggtgg ctgtggcgct ggcggtggca gagtcgtgat ggttcggtgg 360  
cgattctttt cagtgggagt aggcctgtag cctgcaactg tacataagac ttgttattac 420  
attgca 426

<210> 79

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D2

<400> 79

gtccgggata attcaaagcc ttgtcccaaa tgcaaacggc ctattgaaaa aaatcaggga 60  
tgcattgcaca tcacatgcac tccaccatgc aaatttgagt tctgctggct atgtcttggt 120  
ccatgggtcag agcatggaga gaggactggg ggattttatg cttgtaaccg ctatgagtca 180  
gcaaggcaag aaggagcgta tgatgaatct gaaaggagaa gagaaatggc aaagaactcc 240  
cttgagagat acacacatta ttatgaacga tgggcagcca atcagtcgtc gaggcaaaag 300  
gcactggggg accttcaaag cctacagaat gacaagcttg aaaggttaag tgacatacaa 360  
agtcaacctg agtcacagct gaagttcatt gtagaggcat gggtacagat tgttgaatgc 420  
agaagggtat tgaactggac 440

<210> 80

<211> 107

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D3

<400> 80

cttgtccctc ttgggtgctgg gtttgtgctg gttgtcgcgc ttgggtgctc gtcgctgct 60  
ctcctccgtg gcttcttccg ttctgctggc tatgtcttgg tccctgg 107

<210> 81

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-A12

<400> 81

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tcgcatcgca tgcgtgtgct gtccgaccgc catctccgca gccggttggc ctagctacct 120  
cacctcacct cagcaggca cactgcacac acacccatgg tgggtggcggc gatgcggcgg 180  
ccgtgcgctg tgccagcgct gctggtggcg ggcacgctag tgcttctgct gctgctgctg 240  
tcaccgtcga gcgcgcagcc gatgccgtcc ccggcgggcg cgccggggccc cgcgggcggg 300  
accgggatcg actcggcgctg cctgaactcg ctgctcaaca tgcgggactg cctcccgctac 360



gtgagccagc ggagcacggc gcggcgcccc gacgcgccct gctgcccgga gctggcgggc 420  
ctcgtc 426

<210> 82  
<211> 443  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-A2

<400> 82

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tagggagaca taacatgaga gaataattga agagggtagt acaattactt cattttctct 120  
atcagaagat ggtgatttcc tgcttgtaaa tcttgtaagt gaagagattc atttgtggaa 180  
cataagaaat gatcctgttc gagtcaaccg atacaatggc cataagcaca gccggtttgt 240  
gataaggctc tgttttggcg gatctgagca ggcgttcatt gctagtggga gtgaagattc 300  
acaggcttac atatggcata gagccactgg tgatctcatt gagactctcg ctggtcactc 360  
gggcacagtc aactgcgtaa gttggaatcc tgtgaatccc cacatgctcg catcagcgag 420  
cgacgatcac acagttcgta tat 443

<210> 83  
<211> 354  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-005-Q1-E1-A3

<400> 83

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gcgccatgga tcgcgccgac cccgcgcggg gccgccttgc cgtgctctcc tccacctcc 120  
gtggtgcaag ggccgaagag gcngcagggc tggagaggte gccggtatcc gcgccggcgc 180  
ccgggccccg cgccggcgcg cttgccgtgg tggactggag gaccgggaag cggcacgagg 240  
tcaaggcttc cgaatacagc accgtgcgca ccaccgactt caagaacatt accactggaa 300  
aggacgacaa tgggtcttaag atttatgatc ctggttacct taacactgcc cctg 354

<210> 84  
<211> 428  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB143-005-Q1-E1-A4

<400> 84

gtccgcaagc caagcggaag cctgcgggtg agcgtccaga tccacccgcc ccttcggca 60  
ttccccgccg ctctagcctc ctccgccggg accgccgcg acgcgccacg gngaaggcct 120  
gcgggggatat tgggtaagca gttgtgatcc tgttctcttg ctcggtatgcc gggttactat 180  
gacatcgatg acatcctcat ggaggatgag cctatttcag ttgttttcca agtaactgca 240  
aatggtgttg gcctgctaga tccctggtgct gaaagtaact gtgtagacaa gggcgccaag 300  
gtggacctcc cattttggct tgcgcattgg ctgctgtctc tggaacaagc tgtgtcaata 360  
nccccacct ccattgcttca cacagaaaac ttggaaggag attcaagctg atgcggcctg 420  
tgtggatt 428

<210> 85  
<211> 447  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-A5

<400> 85

ggtccaccca cgcattccga gatgtgttca ctgccacagt actagatgta gagaaatgca 60  
aagaactaaa gatgggttcc tacttgggag ttgctgcagc ttctgctaac cctcctcact 120  
tcatccattt gtgctacaaa cccactgatg ggaacgtcaa gagaaagctg gctattgttg 180  
ggaagggttt aacttttgac agtgggtggct acaacattaa gaccgggcca ggctgcagca 240  
tcgagctgat gaaatttgac atgggaggct ctgcagctgt atttggtgca gctaaagctt 300  
tgggacaaat caagcctcct ggagtagagg ttactttat agtcgctgcc tgtgaaaata 360  
tgatcagtgg cacaggcatg aggcctggtg acattgtaac tgcttccaat gggaagacaa 420  
ttgaggtaaa taacactgac gcagaag 447

<210> 86  
<211> 441  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-A6

<400> 86

ccacgcgacc gcaacccccct cctcgccgct cgccgttgaa gaggtaggcc cacgggcccg 60  
cgagaatgga ggcggcgacg atggcggtga cgccggcggt ggtcggggcg gggctggtgt 120  
actggttcgt ctgggtgatg ggcgcagcgg aggtgaaggg caagcgggcg gtggatctca 180  
agatgggatc catcacgcgg gacaaggtgc atgacaagta cacgcagtac tggtccttct 240  
tccgcgcgcc caacgagaca gccaccacag ctgcgtctgc tgagaatgtg ccggccttcg 300  
tcgacacctt ctacaacctc gtgaccgaca tctacgactg ggggtggggc cagtccttcc 360  
acttctcacc gtctctcgcc ggccgctctc accgcgacgc cacgcgcgtc cacgatgagc 420  
gcgtcgccga cctcctcggc g 441

<210> 87  
<211> 379  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-A7

<400> 87

acagccaaga aaagcacata cccgagtcgc cgaacaaca acaatcccaa tccccctcg 60  
tactcaaaa ctcgagcaac aatgtcgctg attcgccgtg gaagcgcatt cgacccttc 120  
tccctcgacc tctgggacct cttccagggc tttcccttcg gctctggaag cagcagcagc 180  
agcagcctgt tccccctcgt cgagggcacc accaccagct cggagacggc cgccttcgcc 240  
ggcgctcgcg tcgactggaa tgagacgccg gaggcgcacg tggtcaagac cgacgtgccg 300  
gggctgaaga aggatgaggt gaagggtggag ctggaggacg gcaacgtgct ccagattagc 360  
ggccagcgca gcagggagc 379

<210> 88  
<211> 270  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-A8

<400> 88

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tttaagctca gtgctttgat ctggcattac gatttctctc ctttcattggt tcttatcatt 120  
gcgattctca atgacggtac taccacgacc atctctaata acagagttaa gccatctcca 180  
ttgcccagaca gttggcaact gaaggagatc tttgctacgg gcatcgtgct tggaagctac 240  
cttgcctctta tgactgtcat tttcttctgg 270

<210> 89

<211> 379

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-A9

<400> 89

ctcggtcctt tccatctcct agccgccgcc gccgccgccg cccaaaaccc tacctaccct 60  
cttctccccc tcaactctct ttcattctca ttctaattgg gccccaaccc gtccggcgaa 120  
gctgctagtg cttgtatcta ctatcttcat caggtaactt gcgacccctac tgaagtattc 180  
cccgccgccg ctgccatggc caccctcaac cttttcgaa tctcggcgcc cgacgacaac 240  
gacgaccctg cgctgttgat tgcggcgccg gcggctggct gctcagaaaa cccgagggaa 300  
aaaagccggc cttgggcctg gctggaaagg tgcccaacct gccgggaaca acaagttccc 360  
gaacaagccc ggtccttcc 379

<210> 90

<211> 274

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-B1

<400> 90

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acccacaga ggagtttcgc tcatcactgc gggcaatcat cccgtgcttc acctgcccag 180

acagatactt cgataaagtc agtcaacagg ctcttggagg catggggcact gaatacgatg 240  
acgtcaccat ggtcgtaact acgcacaccg acgt 274

<210> 91  
<211> 457  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-B11

<400> 91

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cagttctgga ggaggaatca gggattatct tacataaccc tatggtgaaa cttttcagag 120  
aacaggatgat tgatggaaat tgggataatg cgggtggttac catgaatata attggccttc 180  
aagatgaaaa catcttgaaa tctgcggcat ttttgatatt ggagcaaaaa ttctttgaac 240  
ttctaaaaaa tgacaatgtc atgggtgcta tgaagacttt acgatgtgag atcacacccc 300  
ttggtgttaa tagaaaaaga gtgcatgaac tgtcgacttg tatgatttct tgttcttcac 360  
agcagttggt ccttggtttt tcaaagcttg gaattgattc ttctagttca cggttgaagc 420  
ttctagagga attgcagaag gtgcttcttc cagctgt 457

<210> 92  
<211> 432  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB143-005-Q1-E1-B4

<400> 92

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gccatctaga tcggtctcga tcacacatgc atatgatgct atgcaggcat tatataatgt 180  
tagcagatga tgatctataa tgtagctga tgatggccgg ttttccatct gcatgcatgc 240  
aggcagatga cgatcgagcg gatcgatgg gcagacgcca ccaaccccg cgcggcgacg 300  
tgaaacacgg tgtcgattag cagggccggg tgggtggttg ttgtcccgtt cgcggggcaa 360

ccaacagcag cgggcagcgg cgcaaaggat cccatatacct atcctgacgg acgccgccca 420  
tatatgtcat gt 432

<210> 93  
<211> 445  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB143-005-Q1-E1-A10

<400> 93

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gtcccccccc atccgccgct gccacgcacc tcctccttct atctccttcc agacgcgggg 120  
acgctcgccc acggcgggcg cggcagctga gtcctctgtc agtacgcttc tcgaggtgcg 180  
cggactcacc gcatccgtga aggagactgg gcagcagatc ctgcgcggcg tcgacctcac 240  
catccgcgat ggcgagattc atgcgattat gggaaaaaac ggctccggca agagcaccct 300  
cacgaaagtt ctcgtaggcc atcctcatta tgacgtaact ggtggtaacca ttctcttcaa 360  
gggtgaggac ctgnttgaca tggagccaga ggacagatct ctagcaggcc ttttcatgag 420  
tttccaagca cctattgaga ttct 445

<210> 94  
<211> 401  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB143-004-Q1-E1-G12

<400> 94

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ctcggcggt caaaacttct tctctcccaa tcggttctgc ctcggccaaa acagctcttg 120  
gaaaccggct tggcaagcag ctatctgttg gcttcttgcc ttagccaaat gaagatcata 180  
tgctcacga tctctctttt tttgttcgg ctgaatctca gagaaaacgt cctgctccct 240  
ccaccaggcc gccaggacgc aacgtttctc tctttttgat ctgctgtttt ttttcttga 300  
atctggcgct agttccctgg cctagcgag gcattgtctt tcatttacca gagatggctg 360

gccgattatg gggcgctgtc tctaaccttt tanaacttgg a 401

<210> 95  
<211> 110  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G4

<400> 95

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ctatctcaca cagaggcccg tctagattcg aacttctctg tgaccaattt 110

<210> 96  
<211> 373  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB143-004-Q1-E1-H10

<400> 96

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acctttgctg gcaggccgcg aaccaaccaa acagctgaag tctgacgacg agccttggtt 120  
cagagaaaca gggcactggg tttagagccc ttcggatcta gtattgtcgt tcaccggcgg 180  
cgaccaggcc aaaccctaga accttgccaa gatgaggtcg ttgcgagcgg cgcagaccct 240  
agtctcccgt tcccttttct cagcgcgcca tctaagcggc gcagcctccc ccgccacagc 300  
cgccgcccgc ggcgcgcggt ggtgtgcagc gccggcgcca ccgccccgtt cgcgcgttcc 360  
atcctcgatg gtg 373

<210> 97  
<211> 202  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H12

<400> 97

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tggcctcaaa caaggtggtg ccccttttaa tgggaaccaa atataacca accgtggcct 120

ccaagctccg aatgaagggc ctcaaggccc tccccttgga gaacttttcc ccgaaactga 180  
 aaacctccgg aacaacaatg gg 202

<210> 98  
 <211> 277  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H6

<400> 98

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 ttcgcccgtt gcgccttcgt cttcctgctg gtgctgctgt gcggctttgg tgttctctgt 120  
 gggtcggcgt gcttgctggt ctcctggctg gtgtttgcgg gttgtcctgt gccccttgctc 180  
 cttcttcgtg gttttcctgt gcctgggctg tttctgcctt gcgctgtgtt ctgcttctct 240  
 ttggctgtgg ttgtgtgtcc gggtggctg tctgttc 277

<210> 99  
 <211> 390  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H9

<400> 99

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 agtgagttgg tgaagctgat tgatattctg aacccttcaa acaaacctgg aaggatcacc 120  
 ataattacaa ggatgggggc agagaacatg aggggtgaagt tgcctcatct catccgtgct 180  
 gttcgcaatg ctggactgat tgtcacatgg attactgatc ctatgcatgg aaacaccatc 240  
 aaggccccctt gtggcctgaa gactcgtcca tttgactcca ttctggctga agtgcggtgcc 300  
 ttcttcgatg tgcattacca agaattgaagc caccctgggg gcgtccacct tgaaatgact 360  
 gggcagaacg tgaccgagtg catcggtgga 390

<210> 100  
 <211> 301  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB143-005-Q1-E1-A1

<400> 100

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gttctcattg atcgcccttc tggacaaatc ttgtcagcac tgactgggtca ctggaagaag 180  
gttacaagcg tagaatttgt aggcgactct gatcttgttt tgaatgggtc tgctcacaag 240  
agagtccgta tctggcggca tcctgtggat gggaattatc cctgtgggta taccttgaat 300  
g 301

<210> 101

<211> 382

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G10

<400> 101

cacacaccct gcacgacgca tccgacctcg ccatgtcagg cgcgcgacgg gtctacagaa 60  
caacggcggg acctgcgtgg ccatcgccgg cgctgattac tgtgtcgtcg ctgcggacac 120  
ccgcctctct gtaggataca gtatcctcac gcgtgatcac tccaagatct gcgacctggc 180  
tgacaaatgt gtactggcat cttctggctt tcaaggatga attaaggctc tgcagaagaa 240  
cctagctgcc agagaattgc tgtaccaaca ccagcataat aaaaggatga gctgccccgc 300  
catggcacag ctctctcca atacctgta ctacaagcga ttcttcccat attacgcctt 360  
caatgtgctc ggtgggcttg ac 382

<210> 102

<211> 361

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E3

<400> 102

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cctttttttg tctccgcttt actgtgttgc tcctatttaa atacgcctaa taataaatga 120

agtaaacaag taaccaattg gatcttttgt ccacgcacct taatttgcac gcacaagtct 180  
aatggactt atataagtct atggaagagt atctactgtc aattttgtta taggcgaaac 240  
cgcaaaacag actacagtac tgcacattgt tggtttatct tatcaacagg aagccggaac 300  
agaaattgag cctatgggtg acctcaatac tgaagctgag aaaaaacttg gtcggcttgt 360  
c 361

<210> 103  
<211> 358  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E4

<400> 103

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gcctgctccc ctctgcctgt gatcatgtct tgcagcagcg gcaagtgcga ctgtggctcc 120  
agctgctcct gtggcagctc atgcaactgc atgtgcctta acgtggagac cgccgccgcc 180  
agcaacatca ataccacggt cctcgccgcg ccgagcatca ctgccagcgc cggcggcttc 240  
gaggcggcca ccgagggcgg cggtgcgac tgcagcacct gcaactgcgg caccaactgc 300  
ggctgctcct gctgcagctg caactgacct tgtcatgcga tggcgcacga tagtctag 358

<210> 104  
<211> 366  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-004-Q1-E1-E9

<400> 104

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gaaggtggcc gcggccaccc aggccgccgg ggacgccaaag gtgagcttcg gggagaactt 180  
ttccccggcg cgggccaagg ggtaccagtt cgggatgggtg gcggtgttcg acagcgtgga 240  
ggagctggac gccgtggaag gggacggcaa ggtggaggag gccaaaggcct cggtcaggcc 300

gctgctggac gaagtgatgg tcctggactt cgtcgtcgga gatgctccaa cgccccgcgag 360  
cctctg 366

<210> 105  
<211> 363  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-F1

<400> 105

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aattcaagag aaggcgggct ggcaagacag actacagggc caggataagg ctgattaacc 180  
aagacaaaaa caagtacaac acacccaaat acagatttgt tgtgcgattt accaacaatgg 240  
acatcactgc acaaatacata tctgctacta tagcgggtga tatggatctt gcttctgcct 300  
actctcatga gttgccacga tatgggtcttg aagttggtct gaccaactat gcagctgcct 360  
act 363

<210> 106  
<211> 379  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-F11

<400> 106

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ctgccaaagg cagctcccc gacttcaaag catatgtgaa gattccttac agcgcgatgat 120  
gtcaaatacg atccgtcatc cacatcgtat cgcgtcgttc tgcttgact ctgcttcttc 180  
ctctatgtat taataatccc agcagcttga aataataaca atgcatgcat gcatccatga 240  
tggaatttag aaataatggt tatgtcccca accacgccta cttatgctct cgagttactt 300  
atttgctgct gtctctcaac tgcattgcta tgtaatatat atacaataaa agattctagc 360  
taaaaaaaaa aaaagaaaa 379

<210> 107

<211> 394  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-004-Q1-E1-F12  
  
 <400> 107  
  
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 gaacctttgc tggcaggccg cgaaccaacc aaacagctga agtctgacga cgagccttgg 120  
 ttcagagaaa cagggcactg ggtttagagc ccttcggatc tagtattgtc gttcaccggc 180  
 ggcgaccagg ccaaacccta gaaccttgcc aagatgaggt cgttgcgagc ggcgcagacc 240  
 ctagtctctc gttccctttt ctcagcgcgc catctaagcg gcgcagcctc acccgccacg 300  
 gccgcgcgcg cgggcgcgcg gtggtgtgca gcgcgggcgc caccgcccc ttcgccgctt 360  
 ccatactcga tggatgatgcc tgccgggggt tccg 394

<210> 108  
 <211> 355  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-004-Q1-E1-F2  
  
 <400> 108  
  
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 tgcaggggag gtcttcttcc aggagaagtt cgaagatggc tgggaaagtc ggtgggtcaa 180  
 gtccgagtgg aagaaggatg agaacatggc tggatgaatg aaccacacct cgggaaaatg 240  
 gaatggagat gccgaggaca aaggtattca aacctccgag gattacaggt tctatgccat 300  
 ttcagccgaa taccctgagt tcagcaacaa ggataagacc ctggtgctgc agttc 355

<210> 109  
 <211> 250  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-004-Q1-E1-F5  
  
 <400> 109

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 gctttttggg gctcctctcc ttttggtctg gtgtcgggtg ttggtgtctc ctctgtggc 180  
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 cctttctctc 250

<210> 110  
 <211> 230  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-F8

<400> 110

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 ccagtctctc ccttgccgtt ttctatcacc ttgccggagt tttcgtcgtc gtggctcttcg 180  
 gtgcgcgctt gttcatcttt ctctgctgct tggtaggggtg tcctctgtcg 230

<210> 111  
 <211> 338  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-F9

<400> 111

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 aagatgatta tggataagta tactaggata caaggagact atgttgccat agtaaagaac 180  
 cccactgagc tcatccctcc catatttatg attaatgatc ttggttcttg cttagagtgg 240  
 aataaagcta tgcagaagat taccggtata aagagggaag atgcgataaa caaattgtta 300  
 attggggagg tcttcacgct tcatgattaa tggctgta 338

<210> 112  
 <211> 316  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E11

<400> 112

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tcagcagttg gacgatgagg acaaactgca acaagtgtca aatgctctct cagagttcat 120

tcggaaagcc acggtggttt gcggagaatg agaaatgttg gagcggcgtg taggatcacc 180

gaatgcatag tacggctcca tacttctgct ctgtttctgc ctgtaactca actgtgaaaa 240

gttttaaact ttcagaaaga aaaaccgtga gaggtgcagg ttcaagttaa tatgaataat 300

aaagtgtttt tttatt 316

<210> 113

<211> 360

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C4

<400> 113

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ccgcgggtcgc tagcacagcc ggccactgcg cagcagcgtg ctggtaggtt gcatgcactt 120

gcaggatggc gcatgtcgct aagacgcttc gccttgtggc cctgggtggc gtgtcggcag 180

tggagctgtg ccgcgccatc gacttctacg agcgggacct gacatcggac tacgcgctgt 240

gggacctgta cgagcgggtg cacacgcaac accgggtgca ccggaaccac ggcgacaatg 300

ggcgccgggtt cgggagcttc aaggagaacg cgcgcttcat ccacgcgcac aacaagcgcg 360

<210> 114

<211> 288

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-004-Q1-E1-C7

<400> 114

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cgcgcccttc gtttttctgg gtcgctgctg cttgccgctg gtgtgcgctg tgctgcttcg 180  
cctcttcttc tgtgtcttct cttggcttgc cctgttggtt gcgtcccgcg tggcgcgctt 240  
cggctctctc gtgggtgcgcg tgtttgttcc tccggtctct ttcttggc 288

<210> 115  
<211> 257  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C9

<400> 115

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atgtgaatat acttatcaag gaattctttg tatgatcttt aagaacgtgc gcattgtaag 180  
atztatgtga cctctgtacg gcatagtata aggtagtttt gcgtggaaaa tcgacagtgc 240  
ttactcaaaa ggtgctg 257

<210> 116  
<211> 334  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D1

<400> 116

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tggtgtgttg ttgggtctaa ctcaagatgg agatagtttt agcaaattct aatttttggt 180  
atcatggcaa caccaagtaa tgatactagt aggatccaac aggtgattgg gacggtgaca 240  
ctggaactta aaaataaggg tattgacatc aaaaatagta aaatactagt gatttttttt 300  
gcagccagag aagcacaagt caaggatagt tatg 334

<210> 117  
<211> 406  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D11

<400> 117

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cccatccaga accatcctcc gctcgacacc ttctctggca gatagcgtcg tcgtgtttac 120  
cgcatcggtg ctcaccatgg cgtcgtagtt gttgccggac ccattgccac cagatgggtca 180  
cgacctcttc atagcttcac tccgtccatg gccgtcgccg ctggtgccac cctcccgcag 240  
ctgtaactcc ctctcccttc ctcatctcac cgcaggcctc atcacgccct catcaccgat 300  
cgttgctggt tctgccctct gttgctggag atcgtgacca tggaaactcg gcgtcgtcc 360  
tagcgctcct cacgatgttg ctgctctagg gcgtcatcct catgtc 406

<210> 118

<211> 354

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D2

<400> 118

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tcgcgtcttc gctgccgtgc ggcgcgtggg tcggccgaag cgggctcgtc cgccgcgccg 120  
ccgccttctc cgggacacgg ccgcgtttcg cgggcgccag ggcgagatc ggggccgccg 180  
tgcctgcgt cgagcagttc cagcgcagga tggcaacca agctactgtg catgccttca 240  
aggatattct gaccagctc cctaagcctg gaggtggtga atatggaaag ttctacagcc 300  
ttcctgcact aaatgatcca aggattgata agctgccgta ctccatccgt attc 354

<210> 119

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D9

<400> 119

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tgctatgctg gaaactatga ctgtggccct aaacttcatg ttcattcatca ttctgtcttc 120



gtgtgctttt acagttcagt atgaatatct ggtcaggctt aaacttcaca atgtgttttt 180  
atgtaatctc aaagttatgg tcttcaaaat agattgtttt aatattcttt tgcaataaag 240  
ccatgggtatt ttcagtcgaa ctcttctcct ttaatacata ttagacatat atttgttttt 300  
taatgtttat tcatttccaa acttcaacac ttacaagtta caccaccaca aagctctttt 360  
gaacaatcat agaaatggta tttgtcattt gatggatcag atatgataac ccc 413

<210> 120  
<211> 368  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E10

<400> 120

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tctggcaaaa tgccatcagt ttatctttac atccctaaca ttatcgggta ttttaggatac 180  
atcataaatt tcattgcatt tgcgggttgc tattccaaca aggctctctt tgctatcctg 240  
tacttcatca gctttgtcct tgatgggtgtg gatgggttgg ttgcaaggaa gttcaatcaa 300  
gcatcaacct ttggagctgt gttagacatg gttacagata gggtagcac tgcttgtttg 360  
ttggccct 368

<210> 121  
<211> 338  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-A5

<400> 121

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aactacatcg atcatcagca gcgagccagc cggccgagcg agcagcaccg atggcggcgt 120  
acatgcgcgt gacgcaccgc gacgaggaag gcaagaaggt gacggagaag atgccgggtcc 180  
cggagacgcg gcgcccggac acggccaagc acttcgagcg caagctggag gagcagggcc 240  
tccaccgctt cgagcggcac cggcggaacg cgccccggg cgtgggcatc ggcgccccgc 300

cgcccaagtc cgggcgcggc ggcaagtaca cctgggag 338

<210> 122  
<211> 273  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B10

<400> 122

ccccatctag cagggatagc ccctcccccga cgccatcctt cgtctcgacc tggtcggcgg 60  
cgacctcacc gactacctca tgaagatcct gactgaacgc ggctactcct tcaccaccac 120  
tgctgagcgg gaaattgtca gggacatgaa ggagaagctc gcctacattg ccctggacta 180  
cgaccaggag atggagactg ccaagaccag ctcttctgtt gagaagagct acgagctgcc 240  
tgacggacag gtcacaccca ttggtgctga gcg 273

<210> 123  
<211> 379  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B11

<400> 123

acgcgtccac ccaagcgtcc gcccacgcgt ccgatcaca ttcacacagc gaaccgtgaa 60  
tccaacacag caacatgcag agcagcgatc cgacatccga tagatggacg cgggtgatgtt 120  
cgggctggag actcccctga tggcggcgct gcagcacctg ctggacgtgc ccgacggcga 180  
cgccggcgcg ggcggcgaca acaagaccgg cagcggcggc agcgccacgc gcacctacgt 240  
ccgcgacgcg cgcgccatgg cggccacacc ggccgacgtg aaagagctgc ccagcgcgta 300  
cgcatctcgt gtggacatgc cggggctggg caggggcgac atccgggtgc acgtggaaga 360  
ccatcgggtg ctggtggtc , 379

<210> 124  
<211> 357  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B12

<400> 124

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caagtaccag ggacttgaga tcacgcaggt ggactgcgca cgggaggcaa tgaggctgat 120  
ccacgcggaa gacaagaacc tcaaggccga ggactcagcg tgggagctga agaagaattc 180  
ggcaacggcg tgagcaccat ggtcctcgtc tacaacgcca ccggggccag cctgagcctg 240  
gtggacgacg ggaaagactg gatgggctcc gtctacagct cgccgatccc ggacaccttc 300  
cacaacgggc agtggatcgc catcctccac gtcaagcccg gtcgctggc gcagggc 357

<210> 125

<211> 366

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B4

<400> 125

ccggggccaca tcgatccaac ccagccacg cctcggagac aggccgacag cccacgagcg 60  
agatccaacc caagttccga cgccgcgggc gagaccgatc agatccacct cagccgtctc 120  
ggatggcgtc agcatcgacg gcggtgcgga tgctccccga cggcggcgct gacgacgagg 180  
agcgggtggct cgccgagggc atcgccggcg tccagcagaa cgccttctac atgcaccgcg 240  
ccctcgattc caacaacctc aaggacgcac tcaagtactc ggcgagatg ctctccgaac 300  
tgcgcacctc gcgactatcg ccgcacaagt actacgagct gtacatgagg gcgtttgatg 360  
agatga 366

<210> 126

<211> 392

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-004-Q1-E1-C10

<400> 126

accacgctn ccacaccagn gctcgcttcg aggagctcaa tatggacttg ttccggaatt 60  
gcatggaacc tgtggaaaag tgcttgcgcg acgccaagat ggacaaaagc agcgtgcacg 120

acgtcgtgct cgtcgggtggc tccacccgca tccccaaggt gcagcagctg ctgcaggact 180  
tcttcaacgg aaaggaattg tgcaagagca tcaaccccgga cgaggctgtg gcgtacggcg 240  
ccgctgtcca ggctgccatc ctcagcggcg agggcaacga aaaggtacaa gatctgctcc 300  
tgctcgacgt cacgccactg tctctcggcc tggagactgc aggtggcgtc atgacgggtgc 360  
tgatcccgag gaacaccacc atcccgacca ag 392

<210> 127  
<211> 388  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C11

<400> 127

gggcgagcgc ttgggcgagc gctatcatga ccggcggcac gctcaggttc atcgggtctg 60  
gcgcagcacc gctcggcaag gacgtgatgg agggagtggc caagattttc cagaagctgt 120  
gattgcccag ggttacggaa tgactgaaac ttgtgggatc atatctttag agtaccacaga 180  
aaaaggacaa attcgtcaat ttggttcaac tggagcactt gtctcaggag ttgaagcaaa 240  
aattgttgat gtagaaacat tgatatgtct gccaccaaat caactaggag aaatttgtgt 300  
tcgaggaccg aacataatgc aagggtatct caacaatgtg caagctactg aatttacaat 360  
caagcaaggg tggttgcata ctggtgat 388

<210> 128  
<211> 344  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G4

<400> 128

cccgggccga aacacgcgtc caacgcagtg gaagaagcat atcgaggagt cgattgcggt 60  
gacggaggtc cattcggagc agttgtcgtc tgtaatgacg aagtagtagt cagctgccat 120  
aacatggttc tgaagcacac tgaccctact gcgcatgctg aagtaactgc aattagagag 180  
gcttgcaaaa agcttgggaa aattgagctc tcagactgcg aaatttacgc gtcctgcgag 240  
ccatgcccga tgtgctttgg tgcagttcat ctctcccga tcaagaggct ggtttatggg 300

gccaaaggcag aggctgccat cgccattgga tttgatgact tcat 344

<210> 129

<211> 69

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H10

<400> 129

gacccacacg tcaggtaacc tcaactcaga gggaatttgc acaaaccgct tcaatttggt 60

gaaaggggtt 69

<210> 130

<211> 104

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H12

<400> 130

gaagctacat tcctaaaacc atctgcttca gccttcagcg agccccaagt ttagtcggcc 60

gatcgattac tgaagtagta tggcctcgcc aagacggccc tcag 104

<210> 131

<211> 329

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H2

<400> 131

cgtccaacat aaggaccact caaagttcaa aagaaagggt gaagatctct tttatgagca 60

caccctgtct ctgaccgaag ctctatgtgg gttccaattt gttcttacac atctggacaa 120

caggcagctt ctgatcaaat caaaccgccg cgaagttggt aaacctgacg aattcaaggc 180

gagaaacgac taggggatgc ctatttacca gatgcccttc atgaacggga agctctacat 240

tcatttcaca gtggagttcc ccgactcgct ggcgccagag cagtgcgaagg ctctcgagtc 300

ggtacttccg ccaaagcctt cgtccaagc 329

<210> 132

<211> 417  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-G12  
  
 <400> 132  
  
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 cacaatatac ctgagatact tctgagtaag atactccctg tcatgctgtc ctctgtcgag 120  
 tctgcctcac ttgagtttcg atcagtagct gctctatcca taactgtttc gtgacatctg 180  
 agtgcctaac ttactatcga cgacttgact atcattgtca tgctatctgc tgtcaatcat 240  
 tgtgctacca gtgaatgtcc tatgcgacaa agtcatcagt atgagaaatc tcagtctgct 300  
 gaatcagtgt ctgctcaaat tgttcatcaa gtagtatttc cacatgtagc aactgaatgt 360  
 accgacactg atcgtacatt acgttcaactg atcatattat caatgctcat atcacao 417

<210> 133  
 <211> 377  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-004-Q1-E1-A11  
  
 <400> 133  
  
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 ggcgttgga atgttgatct ggcgaagaaa accaattacc tcctcgtcga caacaagacg 120  
 acagttaaac aaatcgagga cgcgttcaaa gaatttactg caagggagga tattgctatt 180  
 gtgctcatca gtcagtatat tgccaacatg ataagatttc tggatggatag ctacaacaag 240  
 ccagtccctg ctattctgga gatcccatcc aaggaccatc catatgatcc agcgcacgac 300  
 tcggtgctgt ctgagtgaa gtatctcttc tctgcggaat cggatggcgtc tgataggcga 360  
 tgaaggcatc cttgtgt 377

<210> 134  
 <211> 287  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-004-Q1-E1-A12

<400> 134

ggaggaggcg gaggggggatg ccatggggcaa ggacgtcgtg gtccagagcg gcgcgggcg 60  
cggggatttc gccgccaagg agtacactga cccgccgccg gcgccgctgg tggacgctgc 120  
agagctgggt tcgtgggtctc tgtaccgcgc ggtgatcgcg gagttcatcg cgacgctgct 180  
gttctgttac gtgacgggtg cgacagtgat cgggtacaag caccagacgg acgcttctgc 240  
gtctgcgtcg ggggccgggg ccgacgcgc gtgccggcgc gtgggcg 287

<210> 135

<211> 258

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-004-Q1-E1-A2

<400> 135

gtgcgtgcct tgggttgct gtggcgtgtn gtgggcttgt gcgggtgctg cgcgcgggcc 60  
cgggggcccc gctgggcgtt gcgtgcttgc tgggtggggg ggctgtgggg gggtttgttg 120  
tggggggggc gtttgggcgc gtcgggtgcgc ctgtgctggt gcgtgtcgtg ggtcccttgg 180  
tgacggcctt ggctggggct ggcgtggctg ctgggtggtg gcccgttgtt ggggttgctg 240  
gctctggttc tcgtgttc 258

<210> 136

<211> 348

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-A3

<400> 136

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aagtacactc tcggctacaa gaccgtcctc aggactctca ggaactctaa gtcgaagcta 120  
gtgatcatcg ctaacaactg cccgccccctt cgtaagtctg aaattgagta ctatgctatg 180  
ctggccaagg tcaactgtcca ccacttccat ggaacaatg tcgaccttgg aactgcctgt 240  
ggtaaatact ttcgggtctg ctgcctcagc attattgatc ctggtgattc tgatatcatc 300  
aagactacac cgggtgagca gtaaagaagc ccctgcagta gggggatc 348

<210> 137  
 <211> 418  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-E12  
  
 <400> 137  
  
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 ggccatggcc gccgccggcc agcacatctc cctcgacgac ctccgcgcgg cagcaggcgg 120  
 cgtgcacgac gacttcctgc accagatgcg cggaggcctg ccgccgtctg catggccgga 180  
 actgtcgtcc gcggcaggag ggaaggcgcc ggatggcggc gcgcatgcgg agcacatgca 240  
 gcaccagccg cagcactttg gtgggggtgc ggtcctgtac cagcattccg ccttgctggc 300  
 ctctcggctc cggcagcacc aaatcagcgg ccgccgtcgg gaggccgtga agcagatggt 360  
 gctgcagcag cgggcctatc agaggcacga acaccatgtg ttgcttcagg gcaagggg 418

<210> 138  
 <211> 332  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-E5  
  
 <400> 138  
  
 acgcgtcgac aacaggctgt tccaattagg cctgaagaaa tacggcaagg gggactggag 60  
 gaacatatcg cgcaactacg tccagacgcg gacgcccacg caggtggcca gccacgcgca 120  
 gaagtacttc atcaggctca actccggcgg caaggacaag aggaggtcca gcatccacga 180  
 catcaccacg gtgaacctga cggacgacga gcggggcgccc tcgccgtcgc ggtcctctct 240  
 gatcaccacc accaccagcc atccaaacgc gccggctccg gccgcagtgg tgatacgcgg 300  
 tcccttctcg tcctcgtcgg cggcgggtggc cg 332

<210> 139  
 <211> 371  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-E9



<400> 139

gcaatccact gagttctgtt tgttgagacg catagagcta gctgctagcg tcgacaatgt 60

cgctcgtgag gcgcagcaac gtgttcgacc ccttctcgat ggacctctgg gatcccttcg 120

acaccatggt cgcgtccatc gtcccgtcgg cgacctccac caactccgag actgccgcct 180

tcgccagcgc ccgcctcgac tggaaggaga cgcccagggc gcacgtcttc aaggccgacc 240

tccccggcgt caagaaggag gaggtcaagg tcgaggtcga agacggcaac gtgctgggtca 300

tcagcggcca gcgcagcagg gagaaggagg acaaggacga caagtggcac cgcgtcgagc 360

gcagcagtgg c 371

<210> 140

<211> 129

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-F11

<400> 140

attccccgtc agaccacga atcaaggctg atgcccggag cgaacttgaa tccatcacac 60

tcgcgtcacc ttcatatgat gcaacatccg cgaatgcac tgtattgcaa aaatagacaa 120

atgcttcgc 129

<210> 141

<211> 340

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-F2

<400> 141

ccgggccgat cacgcgtcgg cctatctctg aaactactgc tatttttgca ggtgttgatg 60

tcaccaacga gccattcga gttttgccta ctgtgcacta caatatgggc ggtattccaa 120

caaactacca tggggaggta ctggatatca acggtgataa tccagatgct gttgttcctg 180

atctaattggc tgctggtgaa gcagcctgtg catctgttca tgggtgcgaat atgctacgct 240

caaattcgct tcttgacata cttgtttttg gcagagcttg tgcaaacagg gtagcaaata 300

tttctaaacc acgtgagaag cagaaacctc tggaaaaaga 340

<210> 142  
 <211> 391  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-E11  
  
 <400> 142  
  
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 ctccgctgcc accgccgcga ctccacctct gtcgccacca tgggtcaagtc caaggccatc 120  
 aggggtccacg agctggggcgg ccccagaggtg ctgcgggtggg aggaggtgga ggtcggggag 180  
 cccggtgaag gggagatccg catcaggacc accgccgtcg gcgtcaactt catcgacatc 240  
 tacttttcgga aggggggtcta cgccgcgccc accatgccct tcaccccagg aatggaagcc 300  
 gttggcgctcg tcaccgctgt tgggcctggc ctactggca ggaaggtggg cgatgttggt 360  
 gcatatgccg gcaaccccat gggtctctat g 391

<210> 143  
 <211> 359  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB143-003-Q1-E1-B9  
  
 <400> 143  
  
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 ccttcgaaat gcgaacctgc gccatagcga catctgctgc agtcacgatg tgacgagcag 120  
 agataccgtg gatgaagact tcagggactt cgaggctgcg tgggtgatatc atgtatcttg 180  
 ttcatatc atgttatcga gagtttggtt ttctttctac tgcgggtatt caatcaactg 240  
 tggcttctgc tggcactctg ttctgttaa gatagcttcc atctcaaac ctacatacaa 300  
 atttatagac aattgttgta ccttttttta gtattaaatt tatttatata ataaattta 359

<210> 144  
 <211> 337  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-C1

<400> 144

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ggcggcggttg gcagcgtcag gcagttcaac ttcacctcag tcatgccgtt cagcttcatg 120  
aaggagcgtc tcgagttcct cgacgcggac aagtgcgagt gcaagaacac gctcatcgag 180  
ggagggcgga tcggcgtcgc catcgaaacg gcgacgtcgc acatcaaggt ggagcccgcg 240  
gccggcgggcg ggagcgtggt gaaggtcgaa tccacttaca agctgctgcc gggcgtggag 300  
gtgaaggacg agatcgccaa ggccaaggag tccgtca 337

<210> 145

<211> 355

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-C12

<400> 145

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cgccgttctc cgtgccttcg ctgatcatgg aggaggaagg gcggttcgag ggggaggtgg 120  
cggaggtgga gtcctggtgg ggcacggagc ggttccggct caccaagcgc ccctacaccg 180  
cccgcgacgt ggtcctcctc cggggcacgc tccggcagag ctacgcgtcg ggggagatgg 240  
ccaagaagct gtggcgcacg ctcaacgcgc gcatgtcgtc gcccgcgcgc gagcgcacgc 300  
gggcgccgta cgtcgagctc ctcaagccca gcatgccga tcgcgatcac ggctt 355

<210> 146

<211> 93

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-C2

<400> 146

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gcttgggtgg cactttccgg ggatgtgtcg tcg 93

<210> 147

<211> 204  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-C9  
  
 <400> 147  
  
 aattgttaaa attggtcaag atcggatcgg aaagaagagg gcacaaggat gttggtttcc 60  
 ttagagaggt cgacgaagta gtgagaacag gattgacgcc tgcggagagg ctgctgaacc 120  
 tgtacgagac caagtggtaa cgcaacgtcg accatgtttt cgagcatttg ttatactgat 180  
 tactgacgat gacgccgccg aatc 204

<210> 148  
 <211> 363  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-D11  
  
 <400> 148  
  
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 gggattcgcc ggcgcggtag cgagagcgag agatggacgg gaggatgttc ggtctcgaga 120  
 cccccctgat ggtggcgctg cagcaccttc tggacgtgcc cgacggcgac gccggcgcg 180  
 gcggcgacaa ggcgagtggg gccgcggcgg gcggcgggcc cgcgcgcacc tacgtccgcg 240  
 acgcgcgcgc catggcgggc accccggccg acgtcaagga gctcccgggc gcgtacgcgt 300  
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 ggg 363

<210> 149  
 <211> 330  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-D2  
  
 <400> 149  
  
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 acgaacggtc agatggagcg tgggtacgtc gacgactacg tcgacgtcta catggtccgg 120

aacgtgtacg tcgagttccg cagcgctcgag ctcgggcgacc gcgccctgta ggagctgctc 180  
ggccgcgtct acgcgggggtt acgcatcgac gaccatgtcg cgcccgatgat ggacgtcctg 240  
gagggcagct actactcgtg ccaagacctc agctgcgact tctggcgggt ctgcgacttc 300  
atggacgtca cgtgcgtccg cttcgacgtg 330

<210> 150  
<211> 382  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-D9

<400> 150

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tctctcgtc gtctcctcca agcacggatc aggaacactg aaattctatc tcaaccgggt 120  
ctgccgactg ggtaacttga attcgaaaga tgaggcatgg tttggaagtc ttccaagaag 180  
cagtcgtacc catgctgata tgaacagaga tgaattggaa ctttggttgc gcagccttaa 240  
gcaagagtgg taatactttt gacacaacaa ggtctatggt actcatatct gaatcagaga 300  
aagctaacct aaatgattag gcaaggaggc tcctttctaa gcctatcaag tttttcaatg 360  
agatgcaaga attgtttatt ga 382

<210> 151  
<211> 351  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-E1

<400> 151

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aaggggggact ggaggaacat atcgcgcaac tacgtccaga cgcggaacgcc cacgcaggtg 120  
gccagccacg cgagaagta cttcatcagg ctcaactccg gcggcaagga caagaggagg 180  
tccagcatcc acgacatcac cacggtgaac ctgacggacg acgagcgggc gccctcgccg 240  
tcgcgggtcct ctctgatcac caccaccacc agccagccaa acgcgccggc tccggccgca 300  
gtggtgatag gcggccctt ctcgtcgtcg tcggcggcgg cggccgaggc c 351

<210> 152  
 <211> 123  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-E10  
  
 <400> 152  
  
 ggccgaccca cgagtcaact tgtcctcaac agccgttagg gcgtccacat tgtagaagcc 60  
 tcctgggtgt gacaagaata cgttccatt ggtttcagtc cgggagggat atcgactaac 120  
 att 123

<210> 153  
 <211> 56  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-A1  
  
 <400> 153  
  
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<210> 154  
 <211> 415  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB143-003-Q1-E1-A12  
  
 <400> 154  
  
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 cgcagccaga cctcgccgcc gccgccgccg cgtcctgccg cctcgcgctc gccctcaagg 120  
 gcctcccgcc cgtcttccac gaactggagt gggacctcgt catggctcgac gcgcccacgg 180  
 ggtggacgcc gcaggcgccc ggacggatgg ccgccatcta caccgcccgc atggcgggcg 240  
 gcgcgcgcag gcccggggac ggaccacccg acgtcttcgt gcacgacgtc gatcgacccg 300  
 tcgaggacaa cttctccaag gcgttcctgt gcgagggata cctcgccgag caagtcggcc 360  
 ggatcaggca ctctgctcacc ccgtcncacc gctagaatga ccgcacacca ttctg 415

<210> 155  
 <211> 357  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-A9  
  
 <400> 155  
  
 cgtcagcttt cgggtgcgagg agtttgttca actgcaccct tagcgcgata cattgccggg 60  
 gacggtgcaa cttgttgoga gctcctcta aggcgagcgt cgcacatgg ttccaccacc 120  
 gtccccaacg acgtgccggg cagctactgc ctgccgtgg cgggcgcgt gcgcgaccgc 180  
 ctcgacttct actacttcca ggggcatgac acgtacttcg agtcccgct ggtgcgcttc 240  
 cgctccaccg tgggtgcgat ttccgttccg ccgggcccct tcgtggcgcg cgaccgcgg 300  
 gtggtggcgg tctgtacgc ctagagcttc cccgtgcgct tcgacatgg caatgtg 357

<210> 156  
 <211> 390  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB143-003-Q1-E1-B11  
  
 <400> 156  
  
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 gacgtgcaga gggcgctcca cgccaacgtc acccgctcgc accaccctg gtccgctgc 120  
 agcgatgtct tgagacgctg gactgacagc gccacgaccg tctgcctat tctcacggag 180  
 ctctcaaca acgacatcag ggtctgggtg tacagtggag acaccgatgg gagagtgccg 240  
 gtcacttcca gcaggtactc cgtgaaccag ctccagctcc cagttgccgc aaaatggagg 300  
 gcatggttca gcnagcactc aggcgccgga gaagtgggcg gctacgtcgt gcagtacaaa 360  
 ggcaaggaga aaggcancct cacctggtca 390

<210> 157  
 <211> 118  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-B3

<400> 157

acgcgctcgga caattgttta acatgaaaga gcacatttga cagatacatc tcagtatgtg 60  
gaccatacag cttatttgtgt agcgaagtac gactgtactg gatgaagtga cgcaggggt 118

<210> 158

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-G1

<400> 158

ggacgacatg gagegagtg ctcctcgacat gctcgacagc gtgtcatgca aaccggacgt 60  
ttggaccatg aacatcatcc tcagcctctt cgggaaccgg ggcgaggttg aactgatgga 120  
gagatggtac gagaagttcc gaggctacgg ggtcgagccg gagaccgca cgctgaacat 180  
cctgattggc gcctacggga agcggcggat gtatgacaag atgtccgcag tcatggagca 240  
catgcgcaag ctgcggttcc cgtggacgac cgcgacgtac aacaacgtga tcgaagcatt 300  
tgctgaggcc ggcgacgccg ggaacatgga gcacgcgttc aaccagatgc gttccgaggg 360  
catgaggccg gacactaaga ctttctgctg cctgatcgac gggttcagca gggc 414

<210> 159

<211> 369

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-002-Q1-E1-G2

<400> 159

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cgaaagagag tattttgctg ttccaaggaa tctgaaactg cttgctgttc cactgtttga 120  
actctacgac aatgttcaga ggtacnggcc tgtcatctct accatccgcg agcagctttc 180  
taggttccag ttcaacatgg ttagctctta ggggtgatgat acaagaaaac caatgtggcc 240  
aaagcagctc ttcggttgct gagctagctg atcaacgtac cctgactgat tttatttcat 300  
tgtgctggat ttttttatat agactactac tatctagaca tgcatttctg attgtattgt 360  
tgttgaatt 369



<210> 160  
 <211> 197  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-G9

<400> 160

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 aattgtacat acgaaaccaa acaaacatga agtacattat atatcctaaa aaacacagga 120  
 aacatctcac aacacagcga cagccacgga ccattcagca tcagttaacc tttcttccac 180  
 gtccaaattg gattggg 197

<210> 161  
 <211> 378  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-H1

<400> 161

cggcgccgct tccgatcggg ttcgctgtgt tcatggtgca cctggcgacg atcccgatca 60  
 ctggcaccgg tatcaaccgg gcgaggagcc tcggcgccgc cgtcgtgtac aacaacagca 120  
 aagcctggag cgaccaggta ttacacaca ttgtccacga ttgcagcact cactcatttg 180  
 ttggttgcta atttgctgtt gctgcatgca gtggatcttc tgggtggggc cgttcacg 240  
 agcggcgatc gcagcgctat accaccagat cgtcctccgc gccagcgcca gggggtacgg 300  
 ctcttccgg agcaacgcct aggaccatct cgtcggcggg ctattcagct ctctctctc 360  
 cgcagtttaa ggtgaacg 378

<210> 162  
 <211> 422  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-H4

<400> 162

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tccggcccct tcggcggggc caccgccttc gccgggaaac ggccacgttc cgcgggcgca 120  
 agggcccaaa ttcggggccg ccgtgcctgc cgtcgagcaa ttccaccgca ggatgtcaac 180  
 ccaagccact gtgcatgcct tcaaggatat tctgaccagc ctcgctaagc ctggaggtgg 240  
 tgaatatgga aagttctaca gccttcctgc actaaatgat ccaacgattg ataagctgcc 300  
 gtactccgtc cgtattcgtc ttgagtcagc tatccgtaac tgtgataact tccaggttac 360  
 cacgaatgat gttgagaaaa taattgactg ggaaaacaca tctccaaagc tggtcgacat 420  
 ac 422

<210> 163  
 <211> 377  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-E2

<400> 163

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 cgagagctct attcgattcg agactcgaga gcatagccgt gcactgggaa gaggacgtct 120  
 acgagcagat gagcgggctg gagctggagc tgggcctgag cctatgcgtc ctcatcgacg 180  
 tegtctacga gcagtggatg cgcgacaccc tccccgccga tgacatcccc gtgccgcggg 240  
 ccattggcagt caaaactgag gacgccgagg atctatcgcc cgccaatcac gaaagccaac 300  
 cagcacaagg ggatgtatgg cgtgattttg ccttggtaaa tctctgattc tttatgctct 360  
 acattgtaca agtgcct 377

<210> 164  
 <211> 449  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-F2

<400> 164

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 ctggcaattg catagcctgc aatgaccatg ttgcacttac gcaccctgac cttgacaagg 120  
 agactgagga gttcattgca gatgtgcttg gggtcgaggt gtttacgcag actattgctg 180

gaaatatcct tgtggggagt tactgcgcct tctctaacag gggtggtttg gttcatcccc 240  
 atacatccgt tgaagacctt gacgagctct ccacgctcct ccaagttcct cttgtcgcaa 300  
 gaactgtgaa cagaggaagc gaggtcattg ctgcaggcat gacagtgaac gactggactg 360  
 ccttttgtgg ctcgacacg acagccaccg agctctcagt catcgaaagc gtcttcaagc 420  
 tgagagaagg gcagcccact gcgattgtg 449

<210> 165  
 <211> 353  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B9

<400> 165

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 tccatgcaac tgacgtccaa ctaccttcag gtggtacatt tgtgatcgcc cattgtttgg 120  
 ccgagtccaa gaaagcagag acagctgcaa taaattataa taaccgcgtt ttggagtgtc 180  
 gcttatcagc gattgttctt gccatcaaac ttgggatgga taggaaaaaa gctatctcct 240  
 ccgttacaac cctctccgat gttgaggggc tatgtgtttc ttttgcctgg agagaagggt 300  
 catctgatcc tgcagtagct gtgaagaaac ttctgcatga ggacccatat aca 353

<210> 166  
 <211> 341  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-C1

<400> 166

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 agtctatatt tctaaactgg aagatcttaa gaagattggt gaccaattg aggcacggta 120  
 caaggagtgc acagaaaggg gttcctctgt agatcaactg gtctactgca tcaacagttt 180  
 cagagaggct gctttgtcca gtgacaaaaa gtttggccat atcgacatat ctgagaaaca 240  
 gaaggtcatt aatgagtgtc ctgaagtaga gaactgggtg agagagagga agcagcagca 300  
 ggacgccta gctaagcaaa ccgatcctgt gctgctcgta t 341

<210> 167  
 <211> 310  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-C12

<400> 167

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gtcacccctc ctcgtccgtc gcctcacaag ggcaccagcg ggccggaccct ccgcggcgca    60
accatggggc tcttcactgt gacgaagaag gccaccacgc ccttcgacgg ccagaagccc    120
ggcacctccg gcctccgcaa gaaggttact gtattccagc agccccatta tctgcagaac    180
tttgtccaat caacattcaa tgccttcctt gtggatcaag taagagggtgc aacaattggt    240
gtctctggtg atggccgcta tttctcaaaa gatgctgttc agatcatcac aaaaatggct    300
gctgccaatg                                     310
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<210> 168  
 <211> 327  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-002-Q1-E1-C2

<400> 168

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attgccatct ggacgtgcac atcacctgng gcctggcaat ggctttccta gtggaggacg    120
gctatggcga actgcagtcg ctggagccgc cccagttga tcttcccatg tgctagtgga    180
ggacggatat ttgtgttgag gaagaaagcc tggtcacgtt gtatgttaat tgttactctt    240
ttttggtgga ggggggcgtg ttcgtgatct taaattctta ggggacttaa ttttccagct    300
tgttggtttg aaatttcctc tgtaaatt                                     327
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<210> 169  
 <211> 402  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D2

<400> 169

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catacgcttt ccatttcagc ggaggcgatc tagcacgatg cgcattgcct agtacagtac 120  
aagcagggag ggtttcttct gaccgaagga ggggaagacc attccagcga gaatcgatgg 180  
atatctcagc caaaaaaggt taaaagacga gggggggagg aggaagtga aacgaaatggg 240  
aaattctgcc gttggcgtag gtgaagatga agggaggaac aaataatctc cttttctcgt 300  
gtcgcataat aacagagaca gtgtgttttc cgttttcccg tttgcctgtg ctgcgttctc 360  
tgctcctctc ttcactgctg cgggggtccg gtttcttggg gg 402

<210> 170

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D4

<400> 170

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cccagggcac cccatcatca aggagctccg cgacaaggtc gcccaggaca acgagagcga 120  
ggagctgaag cacacggcga ggctggtgta ccagacggcc ctgatggaga gcgggttcaa 180  
cctccccgac cccaacgagt tcgcgtccag catctacaag tcggtgcaga agggcctgga 240  
cctgagcccc gacgcgaccg tggaggatga gaacgaggcc gaggagcagc cggaggtgga 300  
gaaggagccg gagccggagc cgtcgtccta cgacaaggac gagctttagg ctttcggatt 360  
tgttttcaag tctagctagc tcccgcctta ctaggaatgt gaatcagtta cggcct 416

<210> 171

<211> 464

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-A1

<400> 171

ggaaccggcc gagaatcccg gggccaacca agcctccgag gaacggcaac aactccggaa 60  
ggaaggctcc aacggtccaa caactccaac ccggtccaac ttgctccggt aacaaaacca 120

acccgggcca acgccgaagc aacccccct cgcctctcgc cagatccggc gccgcctccg 180  
 ccctcactta cactagcacg cacggcggac acgtcgctc ccccgcgca tctgatgcag 240  
 gcgcacgcgg tggccaacgg cgatgcggtg gaagctaac tcctccgtct acaagcgcgt 300  
 gccgtccagg gaaaccgcca tggaaccca cgctcgagacg ccaatgagaa tgacggacgg 360  
 cggcggcagc ggcgcggggc cgtcctggcg catgtcgttg ccgcatgtct gtgtcgccac 420  
 gctcacctcg ttcctccttg gataccaccc cggggtggtg aacg 464

<210> 172  
 <211> 377  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-A2

<400> 172  
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 ggagagtgtc gtcattgggtt ccattgtcgc ttccaggatg gccgttcctc tagttcgcgc 120  
 tctggagaag ctcatcgcaa cgtcctccgc gcccgggact ggctccgccc tcaggccggt 180  
 tgcagtgcgc ggccggcctcc gtggctacaa caccggcgct ccgctccgac gctacgatgg 240  
 ggccgagtcc gaagacgata gcgtccgca gtacgatggg cggcacggcg gccgggacta 300  
 cggcgtgccc agcctgttct cagatatttt ccgtgatccg cttagtgcgc cgcacagcat 360  
 tggccgcctg gtgaaac 377

<210> 173  
 <211> 356  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-A3

<400> 173  
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 cggaagcaag aggaggcgat cgactactcg accagccctc tccgtctttg tctccgatgg 120  
 cggctcgcgt cctcgcgccc ctgcgccctg ccctcgccct cgcctcgtc gccgtaccgg 180  
 ctcccacgcg ggcgtccaac gacgaggggg acgcgtcta cgcgtgcgg cagcggctgt 240

cggaaccccaa cggcgtgctg cagagctggg atcccacgct cgtcaccccc tgcacctggg 300  
tccacatctc ctgcgaccag gtcggccgcg tcgtccgctt ggacttgggc aactcc 356

<210> 174  
<211> 392  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B1

<400> 174

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accgtttatg caggctgaca gttcaacttc aaggaattat ggcggtactg gcatcggttt 120  
aagcatcagc aagtgtctag ctgaacttat ggggtggcag ataagtttca ccagccatcc 180  
ttctgttggg agcacgttca ctttctcagc cacactgaag cactcatata aagatatttc 240  
gggtgattca agtaggagct tgacagaggg actaccaact gcttttaagg gaatgaacgc 300  
catcttggtg gatgggagac ctgtacgtag tgctgttaca agatatcacc tcaagagggt 360  
gggaataactt cttcaagttg tgaacaatat ga 392

<210> 175  
<211> 346  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B11

<400> 175

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gggtccggggc cgcgccttcg cgccgcacgc cgacgtgctg tggatggaga ggtccagccc 120  
caacgtggcc gactgcaccg ctttcgccga gggcgtaag gggcggtgcc ccgaggcgat 180  
gctgcctac aacctctcgc cgtccttcaa ctgggacgcg tctgggatga cggacgccga 240  
gatggccgcc ttcaccccga gcgtcgcgcg cctcggttac gtctggcagt tcatcacgct 300  
cgccgggttc caccgcgacg cgctcgtcac cgacacgttc gcgcgg 346

<210> 176  
<211> 341  
<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-G6

<400> 176

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cgtcgtgggg aaatggacgc cccccgccg ccgagaaagg ggtcaccag aaaccggttg 120

tgcggtacc ctccccggg aatggccac cggtcctcaa taatacagct gggcaagatg 180

ggcagatcgc gacgactgtc cgtaatcatt gtcattggcc agcctccctt caacacgggc 240

gctaccgcgc catacctcgc cggcgtctcc gcagccaacc cgggtccatct ccttccatca 300

cctgccccaa gtcgagcgcc tcccgcccg caagaccaag c 341

<210> 177

<211> 351

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-001-Q1-E1-G8

<400> 177

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ccanattcta canggccaca ccatccaact tggcaatggg tcagttacaa ccggcttact 120

ggccgggacc ggtccaaaga agattaagat aacctggcaa tcaatccttc cgctcacaga 180

ggaaaggaga tatgaggcat gacctttgat atacaagaga aagaaagagg aagagaggat 240

ttgtttcttg acaagctaag catgacgcct ccaggccaac tagacaagcg tgagagaaga 300

agtttttagta tgacgcggaa ggcagcaaaa ctggatctga acatcaatga t 351

<210> 178

<211> 259

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-H12

<400> 178

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atcctagtat cgtagaaacc acctgcattt tcatttggat ctccctaate cctccggcta 120



gctgctttcc agtgagcaag ggatatcaaa ggacacttcc cgtcttctc cegtggctgt 180  
 ctgtcatctg gctctgaaac gatggcagtc ctgcaaatta ctgctgctgc ctctccccct 240  
 gtctctgtga gtgggttcg 259

<210> 179  
 <211> 162  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-A11

<400> 179

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 gcaacgctag ctcaagtcgg ggcgcggggt cgctgtttcc gtgtactata tgctctcggc 120  
 acctcggatc agtagtgcct gctacggttg gcttgtcccc ac 162

<210> 180  
 <211> 315  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-A3

<400> 180

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 cagtcagcct caaacctctt tctcgtccga atccagaact tccatccatg gcagtgtcat 120  
 cagggatggc cttctccgtc cgcccgcggg ctccggcccg gccctgcgct tgctctgcca 180  
 cggcgagggc gcgccccgtc ggcgacggcg ccaagtggcg ggcgccgctg ctgggggtggc 240  
 ccgggcagcc ggactacatc gatgcgcggc cggcgctccga ggacgagcct ctgccgcggg 300  
 ggccggcctc ggcct 315

<210> 181  
 <211> 296  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B5

<400> 181

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 ttctctctcc tcttagcaca gctagcgctt gctccccctc gcctgtgatc atgtcttgca 120  
 gcaacggcaa gtgcgactgt ggctccagct gctcctgcgg cagctcatgc aactgcatgt 180  
 cccctaacgt ggagaccgcc gccgccagca acatcaagac cacggtcctc gccgcgccga 240  
 ccaacaaggg caacgccggg cggttccaag ccgccaccga aggcggcggc tgcgac 296

<210> 182  
 <211> 103  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B6

<400> 182

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 ctcaataaaa aaaaaaaaga aaaaaaaca cgaagagag aac 103

<210> 183  
 <211> 411  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B7

<400> 183

ccacgcgtcc ggccgctgat ccaattaaac ctatggaggc tgccgcgttc agcaacacaa 60  
 aggacaccgc ttctccaccg gagaagaaac cttcccaacc aactccatca aagaagaaga 120  
 acagaaaagg cggcctgtcg ctgttcctga gcggcgctct cgacgacacc ccaaaccacaa 180  
 gcctccctgc ccccgctgtg cctgccacac cgaagcccga aggaccgcc tggggcggcg 240  
 tgaagataac caagggacct gcttcgcttc gagacatcca gaccgagcag agcagaacaa 300  
 acgagcccgc gtcggccaag gcgaaggacc gccacgagaa ctcgccggac agcgccggcc 360  
 gcgcgacaag gctctcctcg ttcatccccg acgcgcgttc cagcccaata g 411

<210> 184  
 <211> 422  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B8

<400> 184

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ccgacccagc tgacgccgtc cagcgcgccg cccacgcgcg ggggcgcgat gcccatgccc 120  
aggaagcggg tccgcaccaa gttcaccgcc gagcagaagc agcggatgca ggagctgtcg 180  
gagcggctcg ggtggcggtc gcagaagcgc gacgaggcca tcgtcgacga gtggtgccgc 240  
gacatcggcg tcggcaaggg cgtcttcaag gtctggatgc acaacaacaa gcacaacttc 300  
ctgggcgggc acagcgcgcg ccgcagcgcc tcctcgcgcg ccccgcccc cgcgcgcgcg 360  
tcgtccaaa cccaaccgc cggcgccggg gctgctgcag caccgtcatt caaccgctcg 420  
ag 422

<210> 185

<211> 329

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-C10

<400> 185

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tgtgatcatg tcgtcatgct gcggcgga gtcggggtgc gggtccagct gtcctgcgcg 120  
cagcggatgc aacggctgcg gtatgtaccc tgacgtggag accgccgcca ccagcagcgt 180  
caagaccacg gtcctcgcgc cgcgcaccac caaggccagc gccggcggtc tcgacgcggc 240  
caccgacggc ggcggctgcg actgcaacac ctgcaagtgc ggcaccagct gccgctgctc 300  
ctgctgcagc tgcaactgaa ctggcccg 329

<210> 186

<211> 438

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-002-Q1-E1-C4

<400> 186

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 tggatgatgtg gggctcgggt cggttcttcg tcgcgttget ttcttccttt cctcnccttc 120  
 cctccccacg tacgcgggtc gccggcacgc gctcgtgacg cgcaagtcgc aggtcgcagc 180  
 aaccgtaacg cgcgcgcgagc ccgcatggcg gcctgactcg gcgccacgcg tttgctcctc 240  
 cggccaccat cctgggtcct tccttgtcgc cgtttcctcg gctatatagc cgccagcctg 300  
 gcggaaggag aacggccaaa ccagcacccg ccgcccacag gaacatcgcc gccagatcg 360  
 gctgcatacc tggtttcttt ctgggcgcgc gagttcgcat cgtcgggtcg tcgttcggta 420  
 acttggggga gcaatggg 438

<210> 187  
 <211> 134  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-C5

<400> 187

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 cagcatgggt agtggtgtcg ggtcctttcc ctgaaactga aagaaagcag cggcgtgcct 120  
 gtcgccttcc ggct 134

<210> 188  
 <211> 418  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-C6

<400> 188

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 atcatgctga accagaacat cagaaatttg aactgaagcg taaaccgttc ctcttgcaat 120  
 tgattgggaa tttgccggag gaggagctcc tgacatcaac actagctgca aaactgaatg 180  
 catatgccgc tgagctctgc cctgtgaata cccaaaagag aattaactcc aagattgatg 240  
 aggtcacaaa gaaaggatgg ccatttttaa gggacattta actctttcta gcttttggac 300  
 tgaaaccgat cgatgcaatg tagacacaga agagggtgcat gattttgcat agaagatttt 360

taggaatatt tcagctgttc gccactgccca tgatgacctc aagcatccag tcgtcagt 418

<210> 189

<211> 435

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-002-Q1-E1-C7

<400> 189

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tgatttcaag atgatctcaa gggcacttac cagaaaagga actgctcttg ccaaacttgc 120  
taaatacatcg caagactatg atgctgccat tgagattttc cagaaggcgt taactgagca 180  
ccggaaccca gatacactga aaaaactaaa tgatgcagaa cgagcaaaga aggagctgga 240  
gcaacaagag tactatgacc caagaattgc tgacgaggag cgagaaaaag gtaatgagtt 300  
ctttaagcag cagaaatata cagaagcagt gaaacattac accgaagctc tcaggagaaa 360  
ccccaaggac cccagggat acagcaatag ggctgcctgt tacaccaagc tangggccct 420  
tcctgaagggt ctgaa 435

<210> 190

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-C8

<400> 190

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cggtcggcgc ccttcgcgat cgtgtcgttt cttcccgcag cctgcctgcg tgtgggggtga 120  
tggttaggca cttcaagtac gtcacctcgc gcggcgggtgt cgcggcgggg tacgcggcga 180  
gggagttcgc caagcagggc gtcaaccccg gcgagctcgc catcatctcc aaggaaccag 240  
tggtccctta tgagcgcctt gcactcagca agggatacct cttccctcag aacgctgcaa 300  
gactgccagg cttccacacg tgtgtgggca gcggtggaga gagactactt cctgaatggg 360  
actctgagaa aggcattgaa ctgatcctga gtactgagat tgtgaaggcc gaccttgctt 420  
caaagactct gaccag 436

<210> 191  
 <211> 374  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-002-Q1-E1-D11  
  
 <400> 191

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ctgcagtgcg gtccagaatt tacgggtcga cgcgcgcgtc cgagcacagg tacggccacc 60
accacgggcc aggaagcaag ctcaaaccct aaccgccggc gacgccagca cgatggcccc 120
ctacgaccgc gcatcaccg tcttctcccc cgacggccac ctcttccagg tcgagtacgc 180
cctggaggcc gtccgcaagg gcaacgccgc cgtcggcgtc cgcggcacgg acaccgtcgt 240
cctcgggtgtg gagaagaagt caacccccaa gctccaggac tccagggtccg tgcgcaagat 300
cgcgtgcctg gacaccaca tcgtctggc atgcgcggg ctgaacgcgg acgcacgcgt 360
gctcatcaac cgcg 374
  
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<210> 192  
 <211> 305  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-002-Q1-E1-D12  
  
 <400> 192

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tgttgatata cattatttcg ttagttacac ttaacgggtg taagtgggtg tttgtcactg 120
ctctagggtt caacttgagt gtgaagatga tgtgtttgca atacttccat cgttaatatg 180
gtatgcttat aataccctta taaacttttg taaacactac cacctccaag cgagaagaca 240
tatccactta taaaaaaaaa aaaaaaaaag aacaagaaaa aaaaaagagc ggccgctcta 300
gagga 305
  
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<210> 193  
 <211> 438  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-002-Q1-E1-D3

<400> 193

agctgcagtg cgggtctagca ttatcgggtc gacgcacgcg tccgggggga cagcacgctc 60  
tgggtcccg cgcgcgtcgca ctccggtggcg ccgcaggggt acatgcccg cgggtctctac 120  
gacctggacg cgtccaagta cggcaccac ggggagcgca agtcgctcac cggggcgcttc 180  
cacgccaagg gcgtccagtg cgtcgccgac gtcgtgatca accaccgctg cgccgactac 240  
aaggacggcc gcggcatcta ctgcgtcttc gagggcgga cggccgacag ccgcctccac 300  
tggggcccg acatgatctg cagcgacgac acgcagtact ccaacgggcg cgggcaccgc 360  
gacacggggg gccgacttcg ccgccgcgcc cgacatcgac cacctcaacc cgcgcgtgca 420  
gcaggagctc gcggactg 438

<210> 194

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D5

<400> 194

ccacgcgtcc ggagaaggaa tccgatccat ccaagccaag ccaaggcaga gaagaagaag 60  
aagaggagga agaagaagca tcggcagcat gtcggagggg actgccaact gcgtggacat 120  
cctgatcgcc atcatcctgc ctccgctggg ggtgttcctc aagtacgggt gcggccacga 180  
gttctggatc tgctctctcc tcaccttctt cggctacatc cccggcatca tctacgccat 240  
ctacgccatc accaagaaca actagctagt catccttgcc gacgacgatc catgtctctg 300  
tatctgcgtc tgttcatatg cctgatgccg acttgtgctg tatgtagtgt cttgacttca 360  
gtcgtgtttt ggctacgtac ccacccaag cca 393

<210> 195

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D6

<400> 195

ccacgcgtcc gcgtgattta aagccagaga atcttctttt ggattcaaaa tgcaatgtta 60

agattgccga ttttggctta agtaatatta tgcgtgatgg tcacttttctt aagacgagtt 120  
 gtggtagccc gaattatgca gcacctgagg tcatatctgg taaactatat gctggtcctg 180  
 aagttgacgt ctggagctgt ggagttattc tttatgctct tctttgtggc actctcccat 240  
 ttgacgatga gaatattcca aaccttttca agaaaataaa ggggtggaata tatacccttc 300  
 ctagtcattt gtcaccttca gcgagggact tgattcccaa aatgctgggt gttgatccaa 360  
 tgaaaaggat tacaatacgt gaaatccgt 389

<210> 196  
 <211> 420  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D7

<400> 196

ccacgcgtcc agttttgtga ggagaggaat ttcatatgtg tgaagagaag caaggcacgt 60  
 ggcgcttgct aggtgtcaaa tagaaagacc gaacccaaac catcgccgtg ttcattggaca 120  
 ccgcgtcgag tttagtcgtg gtacgctaga tgattgtgcg agctgaagga catggatcag 180  
 aatcttgtgg atgcatcaag ccagcaccag aatggaagat gctcaccaag tggtcgtcaa 240  
 ttaacaacac taacatagtg tttatcccag gattataagt ttgttctgtt gtggatgggtg 300  
 ctaagtgtcg gtgggctcag ccttcttata taagtatatc acatctttag cttctttatt 360  
 gaggactgtc acttaagcta gcatgtattt taaaacttat aaatgtttta tacattcaaa 420

<210> 197  
 <211> 461  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D8

<400> 197

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 ttcttcgagg cgaggagagc gtgaaagaca gggcaccggc agcgacgatg tcggggcgcg 120  
 gcaagggcgg caaaggtctg ggcaagggcg gagcaaagcg ccaccgtaag gtgctccgtg 180  
 acaacatcca gggcatcacc aagcccgcga tccgtaggct ggctcggagg ggcggcggtga 240



agcgcatttc ggggcttata tacgaggaga cccgcggcgt cctcaagatc ttcctcgaga 300  
 acgtcatccg cgacgccgtc acctacaccg agcacgcacg ccgcaagact gttaccgcca 360  
 tggacgtcgt ctacgcgctc aagcgccagg gccgaaccct ctacggcttc ggaggctaag 420  
 ctggatgcct ctcccccttg ctgtcctgga tgcccgtttg t 461

<210> 198  
 <211> 358  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D9

<400> 198

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 gtacgtacgt agctagccgc catagcaagc tatgccgaag cagaggagtg atggccaagg 120  
 tccaccccaa cgccgcggag tccgtcgtcg cccagcagc agcaccagta ggctccgccc 180  
 aggcaaacgc cgagggagag ctgccacgg tgctgaccgt gtggcgcaag tcgtgctct 240  
 tcaactgcga cagggtaac ctctacgaca cgcgcggcga catggccctc cgcgtgtgag 300  
 aggaaacgcg ggccattccc gcccgcggt ccccgccaac gtcgtgctca tggacccc 358

<210> 199  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-E1

<400> 199

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 cgggccctcc cagcaagtcg cctccctccg cctaccgcg tcgccgtgca gcccccgcc 120  
 gcgccggtcg cgacgcgcat cggctccttt gacaagggtg tggaggcgct gatcggcggg 180  
 accgacttct ccgaggagga tgcggaggcg acgtgaagc tgctgctgga cgagaaggac 240  
 caggcgcgca tctccgcctt cctcgtcctc ctacgggcca agggcgagac cttcgaagag 300  
 atcgtggggc ttgcgaaggc gatgttgagc tgctgcatcc gagtcgatgg tccggatgac 360  
 gccgtcgaca ttgtcgggga caggcggcga cggggcagac accgtcaaca tctccaccgg 420

gtcc

424

<210> 200  
<211> 422  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB143-002-Q1-E1-E11  
  
<400> 200

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cgcgtcgagg gctggccgag gccagcagct agccggcgct gtccggctcg gcgcggcgcg 120  
gcgtgcagcc agcggggctg tcctgtcct ccggggcaag caaactgccg ggccccgtgc 180  
gggccctcct ctccggttcc gagggcccgg ccaaccggcc ggcgaggagg aaggaaagga 240  
agggcccggt aaggctgtcc ttggccctcc ccgcggagcg ggtggcctcc gagggccgag 300  
gggtgagccg ctccagggcc gtctcggggg cgctgcgcgc gctcaagctg ctccgctcg 360  
acggcgtgga gctgcgggtg tctggggccg ccgtgcaacc cgggttcggg ggctgtttc 420  
aa 422

<210> 201  
<211> 379  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB143-002-Q1-E1-E4  
  
<400> 201

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gcgactggcc cagcagcctt ctgcaaccga cgcacccgcc acccatgctg cgctgccaca 120  
cgccaccgca atgcgcccgc gcgcgctcc gccatcacgg aatgtgggag tcgcctccgg 180  
ctgcggcacc cgcggtggta gtgcggtgag cgcggggtgc gccgcagggt tccgggatcg 240  
acgcagcttc gccggggcac gccgctgtca cggccgcggt agctaaccgc gaaggggggtg 300  
acgcgcggcc cagcctggcc gagcggctgc ggttggggaa cctcctggag gaacggctat 360  
cgtaccacga gagtttcat 379

<210> 202  
 <211> 379  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-002-Q1-E1-E5  
  
 <400> 202  
  
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 tcattaaggg agattccagc atcaagttaa gaatttgaac aaaaaaatgt ccatgctttt 120  
 aagttttttg ttggcactta tgactagtgc agttttttcc ttatgcttgt actccttttg 180  
 gatcatgttt ttaacttttt atttgatgaa atgctctttt aagatcatgt tcccttcaac 240  
 gctacttgga actggggaaa agtggacaat gatgaagaca ataagtgtta ctgaatattt 300  
 aaattatgaa gcaggaaaat tttcgaagag taaagggtatt ggagtctttg gtaatgatgc 360  
 agaggataca aataatcct 379

<210> 203  
 <211> 366  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-002-Q1-E1-E6  
  
 <400> 203  
  
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 cctccgcgcc gtgctctggc ctttcccccg acaccgccag aatcccgaga cctgccggcg 120  
 ccgccaacaa gaaaatggcg tgcctctgct cgccgacgag ccacccgggg tcgttccgct 180  
 gcagtcggca ccgaaccgcg ccggacggcg ccgagggcgt gcccgggcgc accagggcgc 240  
 ggtccgtgcg cgcgctgctg ctccagagga tcggcggcgt ccggcgcgag cccggccgcc 300  
 accaccgccg ccgcggtgtc ggagtcgggg acttccagcc gcgcccctcc aggctgcgcc 360  
 tcatga 366

<210> 204  
 <211> 404  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-002-Q1-E1-E7

<400> 204

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acatccttct ctccgagaag cagtggcggg tgggtgggtgt gcagcagagc cgcgggtggg 180  
tgcactacgc gatgcaccgg ccggagccgc acatcatgct gttccgccgc ccgatcaact 240  
agcagcagca gcaggaggaa gcggctgccg cgcatgtgct gcccaagtga agcctctgct 300  
ggcgaccacg aatgttaaca acccctagcc ctcttttcat ctctagaagg ggcgtcgtg 360  
ttgtgttgat taatccctct ggctgttggg tgggaacttg ggat 404

<210> 205

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-F1

<400> 205

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cagcttaagt gtgcagcacc cagaagaaaa caagcagggt gctccagctg agctatgccc 120  
aatcctgaag aggctttaca gaatactgat aaaaaggag ctcccagcaa gggacattct 180  
tcaagccctg agggacgaaa cgatgaatga tcctcgggaa aggattgaga tggcacaaag 240  
ccatgcattc taccgcccgt ctctccttgg aaaaccatga tctagttagt cttgtagatt 300  
agtagaatat aaacggacgc tgtgctgcaa gtttctccac tgtgcttgct gtccttgctg 360  
ccgagctaca tggggatggg gctttgtcag ttgtccaatt ctttgtgctt cctcattgcc 420  
atggt 425

<210> 206

<211> 348

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-F10

<400> 206

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gctactgcgc cgcgacgcgc accttccgta gcaagcgcgc ggacgtcccg ctccccgcgc 120  
acgcggacct ggacgtcgtc aggttccctcg cgtcccgcgc ccacgcgggc gttgtcgcgc 180  
tcgtcgacgc tgccacgggc caccgggtca cgttccagga actctggcgc gcggtggaag 240  
gggcggccac cgcgctcgcc gcgcgcgcgc tgtcgctccg caagggccag gtcgcgctca 300  
tcctctcccc gaactccgtc cacttccccg tcgccgccct cgcagcca 348

<210> 207  
<211> 360  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-F12

<400> 207

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gcatcaaggt gtacgggatg gactggactg gtcattggtg aagtgatggt ctacatggat 120  
atgtgcaatc tcttgaccac gctgtcaatg acttgaaaat gtacctcaag aaagtatcag 180  
ccgagaaccc tgggtcttcca tgcttctgct tcggccattc gacgggtggg ggtatcattc 240  
tgaaggctgc acttgatcca gacgtagaaa cgctcatcag cgggtgttgc ctgacatcac 300  
cagctgtccg tggtcagcct gccacccaa tcatagcggc catggcaccg atttttgccc 360

<210> 208  
<211> 440  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-002-Q1-E1-F4

<400> 208

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aatccaccgc gccgcgacgc atgtcggcga gcagcaccgc cgtagacgcc tcggggggagc 120  
cgatcccgc ttcgtcgggtg ctgatggcgg cgtcgaagca catcgcggtc cgggtgccgcc 180  
cggagaacgt tgcccttctc aactgcaaga agaaggaccc taaccccagag aagtgcctcg 240  
agaaggggcg ccaggtcaca cgctgcgtcc tcagcctggt gaaagaactt caccaaaagt 300

gtcccaagga aatggatgaa tatgctggtt gcatgtatta ctacaccaac gaattcgact 360  
tctgccgtaa ggagcagcan gcttttgacg aagcctgccc catttctgag tagatcttga 420  
gagttttacg tgcagtggtc 440

<210> 209  
<211> 416  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-F5

<400> 209

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aacctcaggg cagaagttag gtgttctaaa atcagatcat ggaccattgg caataagatc 120  
cttatcttcc tgcacaaatt cacacatgat atttgctggt tcgtcagctg gttatgcaca 180  
ttgctgggac ttaaggactt tgaggcctct ctgggaaaaa agagtcagcc caaatgtcat 240  
ctacagcaca cgtcatttgc cgggtgacac ggcaacgctg gcagttggag gcattgacgg 300  
cgtgctccgc gttatatgcc aaaggactgg tgacatcatt cgcagtcttg tcgttgacgc 360  
agatctccca gcagaagcca catctagatt ccggcagcaa atagagaaca aacgtg 416

<210> 210  
<211> 90  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-F6

<400> 210

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aaagaaaaaa aaaaagttac acgtacgcac 90

<210> 211  
<211> 438  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB143-002-Q1-E1-F7

<400> 211

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gactgcaacg ccaagaaccc cacctgggcc tccgtcacct acggcatctt cctctgcctc 120  
gactgtcccg ccgcccaccg cagcctcggg gtccacatca ccttcgtcag gtcaacgaac 180  
ctcgactcat ggactccaga ccagctgaag atgatggcat tcggaggcaa caaccgggca 240  
catgctttct tcaagcagca tggatggacc gatggcgga aggtcgaggc aaaatacaca 300  
tcaagagccg ctgaacttta caggcagatg cttaccaagg aggtcgctaa gagcgccacg 360  
accgataatg ccctgccatc gtcacctgtc gcatctgagg cttcnaagcc gccatccgat 420  
gattccctg aattcaaa 438

<210> 212  
<211> 429  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-F8

<400> 212

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tacagcacag ttgaagaact tggtgagctt ggcccagaaa aattaaaaca ggcttttagct 360  
gctcgaggtt tgaagagtgg cggctactgt caacagcgtg cagatcgtct ttcttctgtg 420  
aaggttaca 429

<210> 213  
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<212> DNA  
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<223> Clone ID: LIB143-002-Q1-E1-G10

<400> 213

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 ccggcttccg gcttcgggttc aacaaccgag ggcaacaacc ccccccttag gaccaaggcc 240  
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 ggagacgcc 309

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 <212> DNA  
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<223> Clone ID: LIB143-002-Q1-E1-G12

<400> 214

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 ccttgTTTTg ttgatgctta gtgtgggtgac ctgggtgggtg tgggtgggtggg tgttcttggc 240  
 acaagttaca tgctggggat agctatagga ggtacctgtt gaggtgtgta agacagtagc 300  
 tagcaaccgt atgccttggc ttcttgtttg ggtgcgtgac ttgccgactt tctagctgct 360  
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 <211> 406  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-G4

<400> 215

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 gctgtgttcc agaaggacga gatgatcgac atcatcgag ttaccaaggc caagggttat 180  
 gaaggcgtgg tcaactcgctg ggggtgttacc cggcttcccc gcaagaccca caggggcctc 240



cgcaagggttg cctgtatcgg tgcattggcat cctgctaagg tgctgtacac tgttgctcgt 300  
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aaagccggac aggaaagcca tgacgcctca actgagtttg acagac 406

<210> 216  
<211> 433  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-G5

<400> 216

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ccgtgctgtc ggccggcatg tcggcgggca agagcggcag ggagctccag gccatcgagg 180  
acgagtggct ggccgcggcg cggctcaaga ccttctccga gtgcgtcagg gacgccatcg 240  
cgggcctcgg cgtcgcgggc caggagaagc agcgcaggct ccaggagtgg gaccgcgcca 300  
ccggcggtta cgacaggtgc gtgtccaacg accaggcgcg cgacatcgcc gccagcctcg 360  
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tcagggggtc cgt 433

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<211> 438  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-G6

<400> 217

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tttctgctct tgaagcttgc cgttttgata aggtaaggcc tgtcagagat agcatgattg 180  
atgcagtaca gttgtggaaa aaactgactg gagaagatgc aactgacggt agaaataagg 240  
atctaggatga tgggtgaaggg aaactggact caagacggtc aatgcaaagt ggtggaaaat 300  
cagaatgctt tgatgattgc tctccagatt cacctagtaa catgaaggga agtagcatag 360

ctgaaaaggc agcagttctt ttgaagaaaa gaccagcatt aactgacagg gaactgaacc 420  
ctgagttctt caaaaagc 438

<210> 218  
<211> 420  
<212> DNA  
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<223> Clone ID: LIB143-002-Q1-E1-H10

<400> 218

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cttgagtcct tgtcaaaact caaaccagca ttttcaaagg atggcagcac tactgctggg 240  
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atgaagaagg gtcttccagt tcttggtgtc tttaggacct ttgccgctgt tggagttgat 360  
ccaactgtta agggtaatgg gtcctgccgt tgcaatccct gcagcagtga aagctgctgg 420

<210> 219  
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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-H2

<400> 219

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caaggcccca acgccaacg caaggtaagt tagccaattg ggcaactggc ggctttctcc 180  
ccaagaaaaa caacaagcaa aaacttcggc aacctcaacc ctggaatcgt tccccaccat 240  
ggcgtcgcag ggatcctccg tcttcgccgc actcgagcag gccccggagg accccatcct 300  
cggagtgacc gttgcctaca acaaggatcc cagccccgtg aaggtaacc tcggggtcgg 360  
cgcctaccgg accgaggaag ggaagcccct agtgctgaac gtggtcaggc gcgccgagca 420  
aatgttgatc aataatccgt cacg 444

<210> 220  
 <211> 399  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-H5

<400> 220

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ttgcttgctt gctgcttacc tctcagttcc ccactcacgt cccttgccgt acgtacgtgc 180
gtccaacaca ccaggtgaaa atgggctcgg agacggagac ggtcaacgtg gaaggcatcc 240
cgttcccggc ggagatcacc gtcggcaacc ctctctcctt cctaggcaca ggtatcacgg 300
acatcgagat ccacttcctg cagatcaagt acaacgccat cggagtctac ctccacaacg 360
ccggcggcgg cgacagcacc acgcccacgc tgctgggccc 399
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<210> 221  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-H6

<400> 221

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gggaaggagc ggtagggagg cggagatgat cgaggtggtg ctcaacgacc gcctggggaa 180
gaaggtgcgg gtcaagtgca acgaggacga caccatcggc gacctcaaga agctggtggc 240
ggcgcagacg gggacgcgcc ccgagaagat ccgcatccag aagtgggtaca acatctacaa 300
ggaccacatc accctcaagg actacgaggt ccacgacggc atgggcctcg agctctacta 360
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gtgc 424
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<210> 222  
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<212> DNA  
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 gttggttttg tgtgctgggt gggagatcgc acaggggaatt gtttttttat ccctgggttc 240  
 tcccgccctt tgtgtcgccg tgcctgctt cgtgttggtt ggcttcacgt tctacgcttc 300  
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<210> 223  
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 <213> Zea mays  
  
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 ctcgaccgcc agccgttcgc ctcatcatgg cagcgtcgtc gacggcctgc tcggtcgacg 180  
 acgtcagcgt caaggatgcg agctgcacaa acgttgacct caccacctat tccgggaacg 240  
 ttctttctcat tgctaattgc gcatcgcaact gtggcgtacc taactcgatg ctacactgag 300  
 ctggcccagc tctactagaa gtacacggac cacggctttt agatcctgtc tttcccatgc 360  
 aactagtttg gtgcgcagga gcctgctacg aatgaagaga ttgtccattt tg 412

<210> 224  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-A2  
  
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 agagataatg cacagggatc aagatgggtga tggaaagtta atctttgacg aatactttac 180  
 tgggctacat gaccatagac atggttatgg tgacgagaat gcagatattt cgcagattgg 240  
 gaagataaga gttgcgacgg atcggtttta caaacgtgag atagataatg atgggttttag 300  
 ttccggagcat gaactacagc ctgttct 327

<210> 225  
 <211> 338  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-A5

<400> 225

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 actgcaacaa gtgtcaaag ctctctcaga gttcattcgg aaagccacgg tggtttgagg 180  
 agaatgagaa atgttggagc ggcgtgtagg atcaccgaat gcatagtacg gctccatact 240  
 tctgctctgt ttctgctgt aactcaactg tgaaaagttt taaactttca gaaagaaaaa 300  
 ccgtgagagg tgcaggttca agttaatatg aataataa 338

<210> 226  
 <211> 273  
 <212> DNA  
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<223> Clone ID: LIB143-003-Q1-E1-A6

<400> 226

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 tgtatctacg gtcttcagtg tcatgcgtat ctctcggag accaatgatg ctgctaagtc 180  
 atacggtcac gagcataagg attaacggct tgcgatgaat atgtgctcaa cgtcgacggc 240  
 ggccgtagca cagtatgaga tgtctctccg cac 273

<210> 227  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-A8

<400> 227

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<210> 228  
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<223> Clone ID: LIB143-003-Q1-E1-B1

<400> 228

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 tcgccgacaa ggctcgctg tgctgccc ggcacggcag gtccacgtcg ggcgacagcg 180  
 tcggcgtggc catcttcggc ggcggcccgc tgttcttcgt cccccggac cgcggcgact 240  
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<210> 229  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-B12

<400> 229

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 ctttctaatt tagagggtga gtgggatgag ataaatgctg catgggggtca ggctgcactg 240

ctgttgcata ccatggetca gtatttcacc ccaaaattcc aataccggat caagattcac 300  
cctatgggaa gctatccaag agtcacagac atccagaata acacatatga actgtttggt 360  
cccgtgaatt tgttctggag cacccgattt gacaaagcca tgacatgggt tcttacttgc 420  
ctgca 425

<210> 230  
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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-B2

<400> 230

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gaggatcgtg aactagaagc tgagtttcca ctggagggtc ttcggaagca acttgaagaa 180  
ctagagaaag ccaagaccga gaagaagaag gcagcatcaa gcgctaccag tggcagcagc 240  
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gcacgtcgtc tctaatacaa tgcttgctg tctt 334

<210> 231  
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<223> Clone ID: LIB143-003-Q1-E1-B4

<400> 231

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caaccgcacc gctccctcgc caggctcgcc atgactcacg gcccgctcgt gtcgctccgc 300  
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<210> 232  
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<210> 234  
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 <213> Zea mays  
  
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 tcatcgcagc gtcctccgt cccgggactg gtcgccct caggccggtg gcagtcgccg 240



gcggcctccg cggctacaac accggcgctc cgctccgacg ctacgagggg gccgagtcgg 300  
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<210> 235  
<211> 338  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-B8

<400> 235

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ctagcagtga ctgtcgcgtg gacgtgtccg gtgcgggc 338

<210> 236  
<211> 434  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-C10

<400> 236

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gaccgtggcg ctgaagccgg actgggccaa ggcctactcc cgcctcggcg ccgcgcacct 300  
tggcctcggg gacgcgcca aggcgctcga ggcctacgag aaagggttg cgctcgagcc 360  
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acgtccggtg ggct 434

<210> 237  
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 <213> Zea mays  
  
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 ggggcgcgta catcgacgac aagggtggagt cagcgtggct ggggatgctg ttcagggtgcg 240  
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<210> 238  
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 <213> Zea mays  
  
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 ctgctcctgc ggcagcggat gcaacggctg cggtatgtac cctgacgtgg agaccgccgc 180  
 caccagcagc gtcaagacca cggctctcgc cgcgccgacc accaaggcca gcgcgggcgg 240  
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<210> 239  
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 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-C5  
  
 <400> 239  
  
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 cactgaagtt cagaaggata tcattcatcct tgtcaatggg aaggataaac tgcaaggttt 180  
 actactgtaa agaagatgaa gtttgtctct accaatcgat tgcttttgat gtcaaattcc 240  
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<210> 240  
 <211> 337  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-C6

<400> 240

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 cagttctgca tctcactctg ttgaggtgaa aaactgataa catctttgca gtgctagaaa 240  
 acctgagaac ctcatgatat ctaagtaact gagccaagag agagagagag agagagagta 300  
 tctaagtacc ttgatccact tggacagcac agttaga 337

<210> 241  
 <211> 311  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-C7

<400> 241

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 ctttgctaca gattctcaag gagacagcgg cagcaaatca tgcttcatta tcaaaccxaa 180  
 ccaattctgc agcctcagaa agagtactgg aactacaaga gaagattggg gattcaaata 240  
 ttgacaggaa ttcatatgat attatatatg gattagctgg ttcatatttt taatgctaca 300  
 atgttattgc t 311

<210> 242  
 <211> 337  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-C8

<400> 242

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 caaaatatca ggtctggcct cgaatctctc tgctgaggct ggggggaaag gtgcagataa 180  
 gaagaacctt actgaccaa gagacttggt tcaacgaatc ttagattttg tcaagtatgg 240  
 tgactgccct gaagaatcaa tcaagattgc tggaaaacgt gatgttttaa ggggtgtcatc 300  
 gtggtctgaa ttaatccagt tgaatttctt aaagcgg 337

<210> 243  
 <211> 427  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-D10

<400> 243

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 cagcagcgca agaggtcggt agagcgagaa gaaggcaatg gcggccgaga gcttcctttt 120  
 cacctcgag tccgtgaacg aggggcaccc cgacaagctg tgcgaccagg tgtcggacgc 180  
 cgtgcttgac gcatgcctcg cgcaggaccc cgacagcaag gtggcctgcg agacctgcac 240  
 caagaccaac atggtgatgg tgttcggcga gatcacgacc aaggcgaccg tggactacga 300  
 gaagatcgtg cgcgacacct gccgcgagat cgggttcacc tccgacgacg tgggcctcga 360  
 cgccgaccgc tgcaaggatg tggatgaacat cgagcagcag tcccccgaca tcgcgcaggg 420  
 cgtgcac 427

<210> 244  
 <211> 342  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-D5

<400> 244

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caggtgcagg acggctctga gatccgggct ctctgtggaga acaaggcgga gttcgtctagg 120  
ttcgtcgacg acaggttccg gaagctcgac gccgatggcg acgggaagct gtcggtgaaa 180  
gagctccagc cggccgtcgc tgacatcggg gccgccatcg ggctgccggc cagaaggctg 240  
tcgccgcaag cggaccacat ctacggggag gtcctaaacg agttcactcg cgggaagcaa 300  
gagtccgtgg gcaaggccga gttccagcgc gtgctgtccg ac 342

<210> 245

<211> 340

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-D7

<400> 245

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aagatcggca ttcgaagtgc aaagttgaaa ttacatgtgt gcttttgaaa cttaaagggc 120  
aaatacacia accgacactt atctacatgg ttttccaccc atcacagtgc atcttgctta 180  
tctacttaaa cgcactcggt tgggtctcaa taatactgcc acagcatgca gggaccatct 240  
ctttgtttct ttgatgtctc atggcacaat tattgggctg cttagttgct atattctaaa 300  
aaagaatctt tttttttttg gtgtagtagg aatgtaggat 340

<210> 246

<211> 276

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-E6

<400> 246

tagtacgac gaacttgctc tcgtcacttg ataaaaccat ttacacaaaa ccatactta 60  
cagagaccag gaacaaaaat cgagaaatat cacggaacaa aaaagcagaa tccttcttgc 120  
gagccgcagc tatttgcagc aagacttccc attcccacta acggctgccc ctgccctgc 180

caatcatgtc gttgtagtgc ttgagcgact cctgccgctg cagccgcac cccatgttga 240  
acttgtggat gaacgcctcc acgcggcggg tcagct 276

<210> 247  
<211> 326  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-E7

<400> 247

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ggacgacgtg atcgagagcg gcgctggcgg cggcgagttc gctgccaaagg actacacgga 120  
ccctcccccg gcgccgtga tcgacgcggc tgagctgggg tcttggtcgc tgtaccgcgc 180  
cgtgatcgcc gagttcatcg ccacgctgct gttcctgtac atcacggtgg ccaccgtgat 240  
cgggtacaag caccagacgg acgctgcggc gtcgggtgcc gacgcggcgt gcggcggcgt 300  
gggggtgctg ggcatcgctt gggcct 326

<210> 248  
<211> 193  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-E8

<400> 248

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tgttcgggtc gtttttgcca cctgttcgct agcggttctc gcggccctgc gttgtccgtc 120  
tctgggtacg ctgtgtcgcc gccggcgctg tgctctggct cctctcgttg gtggtccagg 180  
tgctgctggt gct 193

<210> 249  
<211> 361  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-F1

<400> 249

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cgcccgaactg tcagtcagcc tcagccatgg ccgcggagga ggagcagggc ttccgcccgc 120  
tggaacagtc gtccctgctc gcctacatca aggccacgcc ggcgctcgcc tcccgcctcg 180  
gcggcggtgg cagtctagac tccatcgaga tcaaggaggt cggcgacggc aacctcaact 240  
tcgtctacat cgtgcagtc gaggccggcg ccatcgctgt caagcagggc ctcccgtacg 300  
tgcgctgcgt gggggattcg tggcccatga cgcgggagcg cgcctacttc gaggcctcca 360  
c 361

<210> 250  
<211> 436  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB143-003-Q1-E1-F10  
<400> 250

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ctgccctctc cttcgcgtga ggcggccccg gcgaccgcgt cggcagtgca agaccagacc 120  
gaggcttctc ccgttggaag gttccagcca tggcgagcgc cgatctgctg cggaaggagg 180  
aggagttcta ctctccctc tttgattccg caaaaggcga cggcgtcaag tcgcgctcgc 240  
aggtgattga gaggaagatt gaatccctcg aggacatggc caccaacgtc agcaaccgga 300  
gatcaagaag atggttgaac gaccgcttgc tgattgagct tgtcncacgc cttcatgttg 360  
aagaaatcaa aggccctctt gtcctccac catggggtga ggagctgccc ttgtcagcat 420  
tctgcaggac aagtgt 436

<210> 251  
<211> 343  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB143-003-Q1-E1-F3  
<400> 251

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cccattcacc gccaccgcca attccatacc gtctctcgcc acctctgctg agagcgagaa 120  
gagatggcag gcaaggggtga tgggccggca atcggcatcg atctcggcac gacgtactct 180  
tgcgctcgcg tctggcagca cgaccgtgtc gagatcatcg ccaacgacca gggtaaccgc 240  
accacaccct cgtacgtcgc cttcaccgac tccgagcgcc tcatcggaga tgcggccaat 300  
aaccaggtcg ccatgaaccc catcaacacc gtctttgatg cca 343

<210> 252  
<211> 347  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-F4

<400> 252

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aggtctttcc cccgaccacc aagaatatac atcgagaagg ggccgactgt tccatccgcg 120  
aagcgccaca catcaaagta ttccaagggc tctaaacacg agcgcgagca gacagagtta 180  
ctcctctcgg cgaacgatcc agcatacggt gtttatgact ttagacccca tggcgagggc 240  
tacacgcaag atcagcaagc agagttgaga tccagggaat tccatcgcgc cgacgatgcc 300  
ttcgcagact cggttagcgc ggacttctcg gaggccacgt caagcga 347

<210> 253  
<211> 349  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-F5

<400> 253

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cgcccacgcg tccgtgaaga acaagggtttt ctccattgat ctcgtttcag atgaaccttc 120  
agtgattgct tgtgatatgg ctcatactcc attggagcca tcctctatag atgttgcaat 180  
atthttgtctt tctttgatgg gaatcaacta tccaagttat ttagaggaag caaatagggt 240  
tctcaaacca agtgggttggc ttgttattgc tgaagtgcga agtaggctag acccgagcaa 300  
cggaggtgct gatcctgaaa agttttctaa agccattatc cagcttggc 349



<210> 254  
 <211> 338  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-F6  
  
 <400> 254  
  
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 gcgtcaagct cggcatccag ggattcgagg tgtccaagct ggggttcggg tgcattggggc 120  
 tgacggggcg gtacaactcc ccgctggacg acgaggccgg catcgccgtc atcgcgacg 180  
 ctttcagccg cggagtcacc ttgttcgaca cctccgacgt atacgggccc ctacccaacg 240  
 aaatcctcct cggcaaggcg ctgaagcagc tgccgcggga gcaggtgcag gtggccacca 300  
 agttcgggat acggcatgac gagagcggca cgcggacc 338

<210> 255  
 <211> 340  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-F7  
  
 <400> 255  
  
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 cactagcagc catgcccac ctcgtcctgc ttctcttctt cggcctcggc gggctcctgc 120  
 ccgcggcgtc ggccgcccac gagcagttcg tgttcgacgg cttcaagggc gcgaacctca 180  
 gcctcgacgg gatggccacg gtcacgccgg acgggctgct catgctcacc aacggcacca 240  
 gccagctcaa gggccacgcc ttctaccgg cgccgtgcg gttccacggg gcgcccgcg 300  
 gcacggcggc agcgatggag tccttctcca cggccttcgt 340

<210> 256  
 <211> 271  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-F8  
  
 <400> 256

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cctacccccgc cgccccgcaa tggccggcct cctccacctc cagtccacgc ttctaccctc 120  
ggcatccgct ctccgccgcc gcgcgggcgc gccggtgccc tgttcgtccc gccgccgatg 180  
ccgggtcaag gcaagattcg ggagattttc atgccggcgc tcaactccac catgaccgaa 240  
ggcaagattg gtccctggaa cgccgcccaa g 271

<210> 257  
<211> 427  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-F9

<400> 257

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catcaaccat tccatccgcc gccgccgccg cctgcgcatg atgaatgtgg ataagctcaa 120  
caagatggct ggcgctgtat gcaccggacg gaacggcagc atgcgcatga agaagaaggc 180  
agttcacaag accacgatca cagatgataa gcggcttcag atcaccttga aaaggatcag 240  
ggggaacacc attcctggta acgatgaggt caacatcttc ataggacgat gttgttatcc 300  
agtttcagaa cccgaaagtg catgcatcca ttctgcaaa tacatagggtg gttagtggag 360  
taccacagac aaaaagtctg caagaccttc tgccatcagt tatcaaccaa ctgggccttg 420  
ataacct 427

<210> 258  
<211> 349  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G1

<400> 258

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agggcacct cggtctcgc tctacacct cctcggcgcc tccccacca cagtgtaaag 120  
cccctgtccc ttctcccc ccgactcgcc cctcatggcg aggaggcgct gctgatgcct 180  
cgcggcgctg gatcggacgc ggcgccacg acacctagcc gcttgcggtg gcgctcgct 240

acgcgcccac tccgccgacg ctgctcctcg gacccccca gagattcagg ccccgctctcg 300  
cctcgtcctg cctagtgcct aggtgaggct ctggccttca aaggtgcgt 349

<210> 259  
<211> 421  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G10

<400> 259

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atccatggac tcggaaggag ttgtagcagc aaaggtggca gatgagacta ctaaaccggc 120  
aatccaagaa gacggcgccg agagcaaggc cgggatgact gatctgctga tgctgaccga 180  
caagtcgcag ctgcaggcgc tggcgatgct gctgcggaac aacgaggagc tcatgatgag 240  
ccaggcgatc aagtcggaga cggagcgcat tgagtacctc aagacggtga gcgactgcta 300  
cacgcgagc atgaagctcc tcgacgattc catggcggcc aggaccacgt acgagcggtc 360  
ggcggaatg aggagcctcg tcgcccggga catggacgac tacgtcgtct acggcctcaa 420  
c 421

<210> 260  
<211> 430  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G11

<400> 260

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ccctgaagcc cggcgacttc tgtggcgagg agtcctcgg atgggcgctc gtccccaagc 120  
ccaccgtcaa cctgccactg tccaccgga cggatgaaggc ggttctcgag gtcgaggcgt 180  
tcgctctcca ggccgacgac ctgaggttcg tcgccagcca gttcaggcgc ctccacagta 240  
ggaagctgca gcacacgttc cggctactact ccaccactg gaggacctgg gccgcgtgct 300  
tcacccagca cgctggcgc cgcctgagga ggaggaagat ggccaaggac ctgagtctga 360  
gggagtcgtt ctgctccacg ggaccgtacg aaggcgatgg cgacgacgcc tcctcccctg 420

aacagagtat

430

<210> 261  
<211> 219  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G2

<400> 261

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tctctgcctc cagtccatag ccaactctgac tatctgcccg attccgcctc ccggttcttc 120  
ggacaccctc gctcctcgg atagttcggg tcgacggtcg gcctagcttc aatttcaggg 180  
atggtgttct acctgacggc gcggtctcat ggcggccac 219

<210> 262  
<211> 252  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G3

<400> 262

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cgtctacgcc tacaactttt gggctctctc ttctttccac gatatcggtt ctagtggctt 120  
cggacacaat cgaagggtccg gctattggga ttgaactctg aaccaactaa tcttgcgctg 180  
gactgtgaca tcactgccgg attgagatca tcgccaccta tcatgggaat ggcacagtc 240  
tgtcatatgt cc 252

<210> 263  
<211> 356  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G5

<400> 263

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tcgcgccgt gccgatctc ctctacaggt aagaaggaga gaaagagggc gaaatggtga 120

agcacaacaa cgatcatcccc aacggggcact tcaagaagca ctggcagaac tatgtcaaga 180  
catggttcaa ccagccccgcc cgcaagcaga ggcgccgcat cgcacgtcaa aagaaggctg 240  
tgaagatatt cccacgacca actgctggcc ctcttcgtcc cattgttcaa tgccagactc 300  
tcaagtacaa catgaagtca agggctggga gaggctttac ccttgaggag ttgaag 356

<210> 264  
<211> 336  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G6

<400> 264

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gtttacaact aagaatatca gttctcaaga tgagctactc acaggatcta atttaattgc 180  
tctaattctt tactgcagct tatggtagcc gcgacattag ttttactatg caccaaact 240  
ttggaaacat cactgctcaa tgatgggcca tggcttctaa cagtcccttc cattgctatc 300  
attgggagag aagtagttac tctgccaatc tgcatt 336

<210> 265  
<211> 355  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G7

<400> 265

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gccgaaggac ggaaggagaa gagggtagcg ccgtctcctc gccccatgg cccacgagaa 120  
gaagctgtcc aacccgatgc gggagatcaa ggtgcagaag ctcgctcctca atatctccgt 180  
cggggagagc ggcgaccgtc tcacccgcgc cgcaaagggtg ctcgagcagc tcagcggcca 240  
gacccccgtc ttctccaagg cgaggtacac ggtgcggctg ttcggcatcc ggcgtaacga 300  
gaagatcgcc tgctacgtca cggtaggggg cgagaaggcc atgcagctgc ttgag 355

<210> 266

<211> 335  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-G8  
  
 <400> 266  
  
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 tgatgcagtt catgtgtcat ctgtatcagt ctctatTTTT ataagctgtc atatgttttc 180  
 tcgaaactat cttgtgttga ttttgtgtga tgtgtacttt taatggcaca gggccatgta 240  
 tttccttgga aacgaccata agagtttgta tatggactta ttttttctcc cattttcttt 300  
 cttgagatgg gctgtatatt tgcttgaaag ataag 335

<210> 267  
 <211> 394  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-G9  
  
 <400> 267  
  
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 cgtgatgacc ttctggctgg tgtacatcgt gtacgccact gcggtgtaag cgaagagggg 180  
 cagcctgggc aacatcgccc ccattgccat cggcttcacg gtccgggcaa acgtccagga 240  
 tgggccgcac cctcgacggc gcggtccagt aataccgccg tgctgttcgg cctcgccctc 300  
 gtcagctggc agtgccgcta ccaatgggtg taatgagtcg ggcgtctcat cggatgcgga 360  
 cactccggcg ttatctacga gctgctcttc atct 394

<210> 268  
 <211> 370  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-003-Q1-E1-H11  
  
 <400> 268

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ctctgactcg ccgtggagat gctgtctatg tattctctga tgacagatgg gaccttgacg 180  
atggcatccc attaggtctt ggaagctcca gcaacaacgg actgtaccct gcggtcgaag 240  
gcactaacag atttcacacg gccgcgttcg ctgggtgctcg aatgtaccga caggaaactc 300  
cagatgcaca ggtcttcaca accaacttca cagggtctgag aaatgatgat gtgaagggtgc 360  
atctggaaga 370

<210> 269  
<211> 346  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H3

<400> 269

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cacgacgggtg acgaccagtg ccgcactcta cctcggcccc gaagtcgaac ctgaaaattt 120  
tggaacaat ggaagaggaa gagtatagcg ctgaaatatc taatgaacaa gatggcgaaa 180  
cagaatgaaa tgctggtgag agtgatgtct tcagaaccag ttgatgtaga tgcagcatgt 240  
ttacgaagag tacggatgat atttgactct gaggaagatg cctttcagtt ttatgtgaca 300  
tatggttgct acgcagggtt tggtactaca agaacatcta acaata 346

<210> 270  
<211> 352  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H5

<400> 270

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agaagttttt ggggtgtgatc gtgggtctgt gggttctctc cggagttgga agcagctgtg 120  
acttcctcac gttgacatac attgccgtcc tgatgctcca cacggtgcca atcttgtacg 180  
acaagtacca ggacaagggt gaccatgtcg ctggaagggc acacaccgag gccctcaagc 240

agtacaaggt gctggatgcc aaggtcctga gcaaaatccc caggggtgcg gtcaaattcca 300  
 aaaagcagaa ctagttagga taagccgcag attgtgaatg cccgtatcat ga 352

<210> 271  
 <211> 214  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H6

<400> 271

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 atctttgatt ggagtcctga tgcttcacac ggtgagagtc ttgtacgata gatatcaggt 180  
 gcacgtggac catatcgctg gttagggaca cacg 214

<210> 272  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H7

<400> 272

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 tagttggaga ttcgaaacga accagtgatg tagatttgtt tcatctaaat atatgctata 120  
 gttc 124

<210> 273  
 <211> 322  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H8

<400> 273

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 tcgtcaattc gctaccctgc gagcaggcat tggcctatgg atgtggccgg aaggctagcg 120  
 gaactgggcc tgaggtagac tgaggacaca agccgggagc gccacacct gactgctgac 180



actgtacgag agctgggaca gctacacgtc accagggacg aggaacaagc aacctccact 240  
 ttccggtgct cgattatgca agagataatg catgatcctc atgtctgcac agctgatggg 300  
 gtgaccaact actggctggc ga 322

<210> 274  
 <211> 97  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H9

<400> 274

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 ttccgttggg ggaaacgtat caggatactg tgcccggt 97

<210> 275  
 <211> 349  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-A1

<400> 275

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 agaagcttaa gaagatgctg agcgccaacc cagaggcccc actgaacatt gagtgcttga 120  
 tggatgagaa agatgtgaga gggtttatta agagagagga gtttgaacac atcagtgcac 180  
 ctgtgctggt acgtgtcaaa ggacccttgg agaaggcctt ggctgaagct ggcttgacaa 240  
 ctgaaaatgt gcactttgtt gaggttgctg gatctgggtc tcgtgttcca gccataatca 300  
 agataatcac tgatTTTTTTT gggaaggagc cgagacgaac catgaatgc 349

<210> 276  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-A4

<400> 276

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catcgcaaag ttcaacacca taggactcga tggccgcgcg ctcgaccact tcaggctcta 120  
gctacctggc tacgtttcag attcgtcctt tcatttgctt tggctctctaa ttaataattc 180  
caaataataa gcccgcggat ggacctctgt ctgtctgtct gtaatttagt ttccaagttt 240  
aggtagtgtt tggttactag ggactaattt ttagtccctc tattttattc cacttttagt 300  
tataaattgc aaaatatgga aactataact ctattttagt ttccatattt gacaatttag 360  
ttacta 366

<210> 277  
<211> 358  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-A6

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tcttcagcgg cgaacagcgc ccaccagatc ccgcccctgc gatggagtcc gtggtgaacc 180  
cgaaggcata cccgctggct gatgcgcagc tgacgatggg taccctcgat atcatccagc 240  
aggccgcaa ctacaaacag cttaagaagg gagcgaatga agcgacgaag accctgaata 300  
ggggcatatc ggagtttgta gtgttggcgg cggacacaga gcctctcgag atcctgct 358

<210> 278  
<211> 360  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-A8

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cccgagccg gcagccccac caccaccac atggccgcca tgccgggtgg ggcccacggc 120  
gccggcgccg cggaccgat gcaggtggac cagccgctcc cccctgccgc cgcaggcaca 180  
gcacacgccc ccgcgcagc caagcatgct ggttctatga ttgaaggag tgatccggtc 240  
acaggccata taatctcgac aaccattgga gggaagaatg gagagcctaa aaggactatc 300

agctacatgg cagagagagt tgtgggaact ggatcatttg gaatcgtctt ccaggcaaaa 360

<210> 279

<211> 328

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-A9

<400> 279

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tccccaaatc ttcgattaga ttctcgttga caagaagact agaaccgaac ctgaccatgt 120

cgctgatccg ccgcagcaac gtgttcgata ccttctccct cgacctctgg gacctctttg 180

agggcttccc cttcggtccc ggcaacagca gcagtctctt cccctcgttc ccgcggacca 240

gctcggagac cgcggccttc gctggcgcgc ggatcgactg gaaggagact ccagaggcgc 300

acgtgttcaa ggccgacgta ccggggct 328

<210> 280

<211> 221

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-004-Q1-E1-B1

<400> 280

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caatgtttgc cgcgggttc cgcgggcta tgtgtggcct gccggactt ggtggggtgg 120

tttcgttgtt tccgtccact ttatctgttg cctatcattt ccttagtgga tatttacttg 180

cgccgttagt gttcgatata ttcaacacct tctgaattca t 221

<210> 281

<211> 367

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B2

<400> 281

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gatgaccaag aaggtgttag aaccgtagat gatgataatt tcattgatga cactggagtt 120  
gatccagctg atcgttatgg cagcgataat gagcgacatt cacctggacg ttatgcacag 180  
gctgaggagg gtgaggagga cgatgaaatc gaacgactct tcaaggggtgg taagaagaag 240  
aagaagaaga atgatcgccc tcgtgcagat attggcctta tagtggaaca attcattgct 300  
gagtttgaag tagcagccga agaagatgca aacttgaata ggcaatcaaa accagccatt 360  
aacaaac 367

<210> 282  
<211> 360  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B3

<400> 282  
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atctggaccg cacaatcaag tactacacgg aatgctttgg gatgaaactg ctgaggaaaa 120  
gggatgttcc tgatgagaag tacaccaatg ccttccttgg ctttgggcca gagaacacca 180  
actttgcagt tgaattgaca tacaactatg gcgttgacaa gtatgacatt ggaacgggct 240  
ttgggcattt cgcaattgct aatgatgatg tgtacaagtt agctgagaat atcaaatcca 300  
agggtggtaa gatcaccgcg gaacctggtc ctgtcaaggg aggatccact gttattgcct 360

<210> 283  
<211> 359  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B5

<400> 283  
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aaaaaaaaa aaaaaaaag aaaaggtata agaaaaaaaa aaaataagaa aaaaggaaat 120  
aaaaaatgaa aaatcacaaa aggggtaatc aataaatttt ggaaaaaaaa aagggggggc 180  
cgccctaggg gttcaaggct tacttgccct tgcattgaat ttcatacccc ttctagattg 240  
tcccctaatt tcatttccgg ggccgtcttt ttacaacttc gtgccgggga aacccttggg 300

ttttcccaat ttaacccctt tgcagcaaat ccccttttcc caattggggg taataccaa 359

<210> 284  
<211> 357  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B6

<400> 284

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ccggcgactg gtgggcccgc gccaccctaa gttgcggagg ttacattgg tctcttcgcc 120  
ggcgacgagc acccaccagg agtcttgaca agtttttcca atggaccaag taccgaatgg 180  
aaggcataag gtttcttttg cgaagccaag agtagttgtg ctttcagatt ctgactctga 240  
ctctgaaggt tttgtagaag agctaactcc tgttcactca aagtcaaacg ggaaggcttc 300  
atctgcgagc ctaaaaactg gtggaaaggc ttcagccttt tctaaagggtg aggcaag 357

<210> 285  
<211> 354  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B7

<400> 285

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catctccgac tccgcgtccg cctcgcgcag gacatatatt cagtgatgga acacaaggag 120  
gccggctgcc agcagccgga gggcccaatc ctatgcatca ataactgtgg tttctttgga 180  
agcgctgcca ccatgaacat gtgctccaag tgccacaagg agatgataat gaagcaggag 240  
caggcccagt tggctgcctc ctccatcgat agcattgtca atggcggtga taatgggaaa 300  
ggacctgcaa ttgctgcaac tgtaggtgtg gcagttcctc aagtcgagga gaag 354

<210> 286  
<211> 359  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B8

<400> 286

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acgacagctg ctccgacgac gtggaggagg ccgtcgcca cctcaacggc ctcgccggg 120

agcccaccga cgccaagttc ctcgagctca agtcgtggct ctctccacg ctcgccggca 180

ccgccacctg cgaggacgcc tgcaaggacc tgccaagac cagcgacaag gacgacgtcg 240

tcaacttcag cctcgacttc gagaagctgc agcgcgtcac gctcgacctc atcacgatg 300

cgtcgggcac catgtccgca ggcacgccc tgccaccctc caacgccgga gcgccctcc 359

<210> 287

<211> 359

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C1

<400> 287

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tcttcacctt acgcgagggc aaaaccaca aaccctctcc ctcccgact cccgcctaca 120

catccagggg cgatgacgct gggtagctcc ggcgccgat cgagcgtcgt cgttccccga 180

aacttcaggc tattagagga gctcgagcgt ggagagaagg gcattggtga tggaacagtg 240

agctatggaa tggatgatgc cgatgacatc tacatgcggt catggactgg taccatcatt 300

ggcctcaca atactgtaca tgagggtcgc atctaccagc tgaagttgtt ttgtgacaa 359

<210> 288

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C12

<400> 288

accacgctt ccagtgagtc agaaccgcct accaggaaaa aggacaaagg tggttaaggga 60

aacggaaccc acggaggagg tgggtgtcatt tcctgggata aaggggcaat tgatgcattg 120

aacggcaaca cgggtaatgc tattgggact ggtggatggg aagatttccg ccaatataat 180

atgaactctg tcggtgctg tgtctaattc gtatccgtta cttctccatg tgtactctac 240

actatctcga acatggcttg tgaccattta tacatttaaa cattacctta ttggtggcag 300  
tatcaactaa gagatatttg tgttcgaaga ccgaaacata atgcaaaggt atttcaacaa 360  
tgtacagggc tgccgctcta aaggatccac acttacgtat gcatacatgc 410

<210> 289  
<211> 368  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C2

<400> 289

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atcctcaagg atctgaagaa ggaattctgc tgcaatggta ctgtagttca ggaccagag 120  
ctaggccagg tcattcagct ccaagggtgac cagcgcaaga atgttgctac tttcctagtt 180  
caggctggga ttgcgaagaa agagaacatc aagattcacg ggttctaagg gacctgtaaa 240  
tgcttgtgcc ctatattgtg tgcctcaaca tattggggag cttgaagcat cgacagttgc 300  
tagtcattgc ttacttatat aagaacataa gtagtatttg ctattgtcaa gtgtgccttg 360  
cttgatgc 368

<210> 290  
<211> 352  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C5

<400> 290

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ccgtacccaa tctaatcgac acccggccga gatgggccgc aagttcttcg ttggtggcaa 120  
ctggaaatgc ctggaagagc ccgcgttctt cttccaatgc gcctgtgctt ccaggctcca 180  
gccagagca aatcgtaaaa gcccttcata agtttcgtga tgcattgtgt ctgtaggagc 240  
agaggagttc gatatccaac ttttgagac ccattctcgt ttgctgcacg aattaacctt 300  
acgtttcttg tcatggagct cggggcttgc tcaatctgag catagggttg ag 352

<210> 291  
 <211> 357  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C6

<400> 291

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actgcaccca gagcgcgatc cattgccggg gaagaagcaa cttgttgcca gcctcctcta 120
tggcgagctc cgaccatggt tccaccaccg cccccaagga cgtgccgggc agctacggcc 180
tgccgctggt gggcgccgtg cgcgaccgcc tcgacttcta ctacttccag gggcaggaca 240
agtacttcca gtcccgctg gagcgctacg gtcaccacgt ggtgcgcatg aacgtgccgc 300
cgggcccctt catggcgcg caccgcggg tggtggcggt cctggacgcc aagagct 357
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<210> 292  
 <211> 360  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C8

<400> 292

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aaccggggccg gccgacacaa gcagcatccc gtcggcgggc atggacctgg cgtcgagcga 120
cctcgcgggc ctgggcgcgg cgagctgat ccgctctcgc gcgtcgatcc cgcgcgcggc 180
tccgcgcacc ttgcgctgc tcaccgctg cctcgtcttc ccgctctcct tcgccgtgct 240
cgcgcactcc ctcttcaccc accccatcct gtcccgcac cggggcgccg cccactcggg 300
gttcgcgccg tggtcgggc tcttcgcgta ccagttcatc tacctcatcg tcctcttcac 360
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<210> 293  
 <211> 419  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D12

<400> 293

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accacgcgt ccacggacgc gtgggtgctg ctaagtattt gatggaggac tgtctttgtg 60
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tatgcttcct gcaggtgaaa tgtgatctgt agtgatgctg tccccgaagt tcagcaagca 120  
 tacacaaaga cagtcctgct gctaagtatt tgatggagcg tgggtgtggac cggaaggact 180  
 tcaactcata tggtagccgt cgtggtaatg atgaagtaat ggcaagggga acgtttgcaa 240  
 acattacgat cgtgaacaag tttttgaacg gagaagttgg acccaagacc attcatgttc 300  
 ctactgggga gaagctttct gtttttgatg cggccatgag atacaaatct gatggccatg 360  
 ctactataat cctcgctggg gctgagtatg gaagcggcag ttctcgtgat tgggctgct 419

<210> 294

<211> 360

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D3

<400> 294

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 ccatggccct cgcgtgcgcg cccataccgc tcccagatcc ctaggacgcg gcacgcaccc 120  
 ttctcgcggg cgcgggcgcg ggcgcggggc gcgggagcag gcatggcgtc gcaggtcgct 180  
 ggggtcaacc cggcgggtggc ggcgccttggg ttcttcttc cgaccttctg ggagatcgag 240  
 gtcacgtgcg ccgcgcgat gatcctcgtg gcgccttacg ttgcctacga gctcctcaac 300  
 ccgcgctcct cgcaggcggc agcggcgggc gacgcgcagc agctcctcgt gcgggggctg 360

<210> 295

<211> 365

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D4

<400> 295

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 cgaagtgggt ctgaccaact atgcagctgc ctactgcact ggccttctgt tggctcgccg 120  
 tgtgctcaag acccgtgggt tagataagga atatgagggc aatggtgagg cactgggtga 180  
 ggacttctct gttgagccag ctgatgagag gaggccttct cgtgctctct tggatgttgg 240  
 ccttattagg actacaactg ggaaccgtgt ctttggtgcc ctcaaggag ctttggatgg 300

tggcctggat attcctcaca gcgagaagag gtttgctggg ttcaagaagg atgacaagca 360  
gctgg 365

<210> 296  
<211> 352  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D5

<400> 296

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gaattctttc ttgtgattaa ggcctggcta atttctatc ttcaggtttg cagatcggcg 120  
cagttttggg cgcaaaggcg tggtcgttct cctcgagcat cgatttaggg ttcttcggct 180  
ttctatgata aggaggagtt gctggattat tttatcaggg aacagaatgg tgtgattcgt 240  
tgattggatt acagtctgga tctctcttgc atcaaattgg tgagcaaggc aaaccacgaa 300  
gcatcccgac gaaggcgaag aaatcgccgt tcgtggaggt agaggttgac ga 352

<210> 297  
<211> 356  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D7

<400> 297

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aggtcgcaaa catgtctacc gtgctccagc gcccgacccc cggcacgggc cagtgccttcg 180  
gccgcaagaa gacggctgtg gccgtcgctt acaccaagcc ggggcgcggg ctgatcaagg 240  
tgaacggcgt cccgattgag ctcatcaggc cggagatgct ccgcctcaag gccttcgagc 300  
ccatcctgct ggcggggcgc tccaggttca aggacatcga catgaggatc cgcgtc 356

<210> 298  
<211> 359  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D8

<400> 298

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cagcagcagg cggcgccgag tagcggtcc ccatctcgag cttgccacca tggctagagg 120  
attgaagaag catttgaaga ggctcaatgc cccaagcat tggatgctgg acaagcttgg 180  
cggagctttt gctcccaagc catcttctgg acctcacaag tctagggagt gcctgccact 240  
gatcctcatc atcaggaaca ggctcaagta tgctcttaca taccgtgagg tcatttccat 300  
cctgatgcaa cgccatgtac ttgttgatgg caaggtcagg acagacaaga cctaccctg 359

<210> 299

<211> 254

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E1

<400> 299

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cccagccatg cctcccatgc gcaagtcccc ggcgacgatt gccctgccg cgggggtcccc 120  
gaggaagacg cggagcatgg ttgctgctgc tgctgcaggg aagcgggcaa cggagcctgc 180  
tccggcgaag gcagtgccgg ccaataagga agacgatgcg gcggttgccg agttgaaagg 240  
gatgaagagg ggca 254

<210> 300

<211> 368

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E2

<400> 300

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aactgcaag ttttgaaaac tgaactgtaa gatggcatca gcagagcttt cccgtgagga 120  
aaatgtgtac atggcgaagc tcgccgagca ggcagagagg tacgacgaaa tggttgagtt 180  
catggagaag gtagcgaaaa ctgttgactc ggaggagctc actgtggagg agcgcaacct 240

cctgtctgtt gcatacaaga acgtcattgg agcccccggt gcctcatggc gcatcatctc 300  
 ctccatcgag cagaaggagg agggtcgagg caatgaggac cgtgtaacac tcatcaagga 360  
 ctaccgtg 368

<210> 301  
 <211> 356  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E5

<400> 301

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 ttttccccca atccgtccca aactcgctc ctacggcgc cgccgcgcgc cgccgcgcgc 120  
 gctgctcggg aatecctcat cttccccacc tgtccgctcg tcagcgtcat gtccggcacc 180  
 accccgaccc ctacacctac accgacgcgc ctaccgcgc cgccgcgcgc gccgccagcc 240  
 gtcgccccg caggtacga cttctcaac tccaagccac cgcccaacta cgtcgcgggg 300  
 ctcgcccggt ggcgcacgc cttcaccacc cgctcgata tcggaccggc ccgcgc 356

<210> 302  
 <211> 359  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E6

<400> 302

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 gtgaaggtag cgggcgcgga ggaagatggg gtcgcggtc gggaagctct tcagccgggt 120  
 cttcgccaag aaggagatgc ggattcttat ggtcggctc gacgcccgc gtaaaaccac 180  
 catctctac aagctcaagc tcggcgagat cgtcacaacc atccccacca tcggtttcaa 240  
 tgttgaaact gttgagtaca agaacattag cttcacggtc tgggatgtcg ggggtcagga 300  
 caagatcaga cctctctgga ggcattactt ccagaacaca cagggtctta tctttgttg 359

<210> 303  
 <211> 360

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-004-Q1-E1-E8  
  
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 gcagcgtgca cgacgtcgtg ctcgctcggtg gctccacccg catcccccaag gtgcagcagc 180  
 tgctgcagga cttcttcaac ggaaaggaat tgtgcaagag catcaacccc gacgaggctg 240  
 tggcgtagcg cgccgctgtc caggctgccca tctcagcgg cgagggcaac gaaaaggtag 300  
 aagatctgct cctgctcgac gtcacgccac tgtctctcgg cctggagact gcaggtggcg 360

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 <212> DNA  
 <213> Zea mays  
  
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 tggcgccgctc tccccctgcc agccggattc cctgctttgt tctcaggcag cattttgttc 180  
 actagtgtgg tagctttgtt gattggagtg cgcaatggga ggctgtgcgg gaaaggtagc 240  
 tcgtgatgac gaagaaaagc ttgattttaa agggtggaat gttcatatta taacaagcaa 300  
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 ttt 363

<210> 305  
 <211> 288  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
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 cggtcacgc acaggacagg acgcatagga agcctatggt tgtattgcat tggagtcggt 180  
 taggtgtaga gagcccccc gacacaaggg aaggcgtcaa attttctggt gggttgtagg 240  
 gtgtgatctg tctgtataaa agctgtggta aangtggnta atgttcat 288

<210> 306  
 <211> 356  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-F7

<400> 306

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 atcaaggagg agttccccac cctctcctat gccgatttct accagcttgc cggagttgtg 180  
 gccgtcgagg tcacgggtgg gctgagatc cccttccacc cgggcaggga ggacaagcct 240  
 cagccgccac ctgagggccg tcttctgat gccaccaagg gttctgacca cctgaggcaa 300  
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<210> 307  
 <211> 359  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G1

<400> 307

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 tttaggcct gcggctcgtg aacacctcat ctatttttag cacttttgcc accagcgacc 180  
 accgatcgat cagctagcaa gccatctcgc tcgctgcacg aggaaccac tggcggcgtc 240  
 gcattgttgt cgctgtagct tgcattgtt ccctaacaac gggccttttc cccttcttt 300  
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<210> 308  
 <211> 409  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G11

<400> 308

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gcccattcat gatatgcgtc atgatctcca tgtaaactga taaggcgtcc cagttcacia  180
tgcgatgccg aagtgggttcg cacgaagacc cacctgcagc ttatgtcaaa tcaggtgcag  240
aacaatatgc ctgtccatca ccaacaaggt aaacgggatct atcagtctca gatgattgta  300
tattagattg acgaagtctg atcctccggc tcgcaggggt gacttcccct tgacgcacac  360
gcacactcag tagatcagtg ctgatcccaa tgctccaggt aaagtcac   409
  
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<210> 309  
 <211> 326  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G2

<400> 309

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atagtgaaac taggtgctgt actatgatgt gctgtgctct gcacttacta tgaagtaaca  180
tcaattcaca ggttcaagaa tttagtgtg cgcatgtgga agaccctgtc atcaccatta  240
tggcgcactt cgacctcgtc ttcgacgcag acgtacacca gcctcagggt catgtccatg  300
atcacacggc gagacacgag caccac   326
  
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<210> 310  
 <211> 353  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G3

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cattctacga ttcaagctc tctctgctcg cagccatggc gaagaattac ccaaccgtga 120  
gcgccgagta cagcgaggcc gtcgagaagg ccaggcgcaa gctccgcgcc ctcatcgccg 180  
agaagagctg cgcgcccctc atgctccgcc tcgctggca ctccgcgggg acgttcgacg 240  
tgtcgtcgag gaccggcggt cccttcggta ctatgaagtg cccggcgga ctggctcacg 300  
gcgccaacgc ggggctggac atcgcggtgc ggctgctcga gcccatcaag gag 353

<210> 311

<211> 359

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G5

<400> 311

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cgaaaatgat gatgatgatg ggagagagag cgcacgcgcc tccgtggcag cactcgccgg 180  
cggccagcgg cgtcacggac gcggacgacg cgtctccgta cgccctccta gcggcgcttc 240  
agcattacct gccgtcgaac gaggtggcgg cgtacgacga agacgacgag gaggcggccc 300  
tgggcgcggc gaccgccgcc gtcgacgcgt acgcttcgga cgagttccgg atgtacgag 359

<210> 312

<211> 273

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G7

<400> 312

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tgccccggtg gtttggttgt agaatgcttg tataactgaa gatcccgctg gctatgtgct 180  
tgcttgtgta cagtgtcttg ttctctgaca atacaatatt gggagggaat actaggcgctc 240



tgtacgtagg cttggatgga aataatatcc ggt

273

<210> 313

<211> 358

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G8

<400> 313

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tcgccctggc gcagctctga cgaagatacg tcgcagcgcc gttctcgtca ccgtcgtgct 180  
ccactcggcc tcagcttggg ctgtctccgc gtttcacctc ggaagggacg aaagcggtct 240  
cgtgaagggt gtgcgtccgg cgctctgcta gcggggccaaa gctgtgtatg ccgtcgtgctg 300  
cgcagtcacg cactacattc agaaccacgg cageccgttt ggaatttatc aaggtgct 358

<210> 314

<211> 366

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H1

<400> 314

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ttccaggagg gccgttcctc tagttcgcgc tctggagaag ctcatcgcag cgtcctccgc 180  
tcccgggact ggctccgccc tcaggccggt ggcatcgcc ggccggcctcc gcggctacaa 240  
caccggcgct ccgtccgac gctacgaagg ggccgagtcg gaagacgata gcgtccgcga 300  
gtacgatggg cggcactgcg gccgggacta cgctgtgccc agcctgttct catgtagtcg 360  
tcattct 366

<210> 315

<211> 337

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H2

<400> 315

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agtccatggc gctcaagtgc gccctggacc tgcgcattcc cgacaccatc gaccgctgcg 180  
gcgggagcgc caccctgggc gagctgctcg ccgccagcga gatcccggcg tccaaccacg 240  
actacctcg gcgggtcatg cgcacgctga cagccatgcg catcttcgcg gccagccacg 300  
accccgccaa ggccgacgac gcggccgctc tagagga 337

<210> 316

<211> 350

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H3

<400> 316

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cgccccgacc tcgtcacctg cacattctcg ggcaactgctg ccgtcacctg cgctgtctcc 180  
gcgccaaccc gcttctctgt cctcaactct gctgacctct caatcgacag cgctccatc 240  
cgtttccggg atttggcgcc taaggagggtg gtgtttttcg cggacgacga gatcctgggtg 300  
ctcggattct ccaaggacct ggtgctcggg gagggcgtgc tcagtatgaa 350

<210> 317

<211> 308

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H4

<400> 317

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gccggccctg cagctcagta ttgactgag actggtggtg gagctgctag cagcgagcct 180

gctacttccct ggtcctgacg gtgcgttcag acctcagacc agtgccgacg acgagctgtg 240  
aggagagggc aaggaaacaa gcctgtgagg aaggcggcga tggagaggta cgacgtgac 300  
aaggacat 308

<210> 318  
<211> 359  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H5

<400> 318

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gacattgact tactcaatcc accggcagag cttgagaagc taaagcacia gaagaagcgg 180  
ctagtccagt cccccaactc cttcttcatg gatgtcaagt gccagggctg tttcagcata 240  
accactgtgt tcagccactc ccagactgtg gttgtgtgcc caggctgcca aactgttctg 300  
tgccaaccta ccggtgggaa ggccaggctc accgaggggt gtccttccg tcgcaaggg 359

<210> 319  
<211> 155  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H7

<400> 319

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gcaaccatga gttgatgggt atcatctgca tcaca 155

<210> 320  
<211> 135  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H8

<400> 320

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 tggcttgtcg ctcggttctg tccttcgcgc tctcggttgc gtttgcgggc tgtttgtggc 120  
 gcttggcttt gttgg 135

<210> 321  
 <211> 432  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB143-005-Q1-E1-B10  
 <400> 321

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 tcaaggacgt gccggggaac gagaacgacc ttcacctcca cgaactcgcc cgcttcgccg 180  
 tcgatgagca caacacgaag gccaatgctc ttctgggggt cgagaagctt gtgaacgcca 240  
 agacacaagt ggttgctggc accatgtact atctcactat tgaagtgaat gatggccaag 300  
 tgaagaagct ctacgaagct aacgtctggg acaagccatg ggagaacttc aatgagctgc 360  
 aggaattcaa gcctgttgaa gacggtgcta ggcgctaacg atctctcctt ctccatgtgc 420  
 cagcctgagg ct 432

<210> 322  
 <211> 402  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB143-005-Q1-E1-B12  
 <400> 322

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 gagggccac tcaagggat tatgggctac gtggaggagg atctggtttc caccgacttc 120  
 accggtgaca gcaggtcgag catcttcgac gccaaaggccg ggattgccct gaacgaccac 180  
 ttcatcaagc tcgtctcttg gtacgacaac gagtggggct acagcaaccg cgtcgtcgac 240  
 ctgatccgcc acatgttcaa gaccagtag agagagatat ttctgcctcc ctatcgaggg 300  
 tcgtccccga tggcctttgg tcgcagacca tctttgctgc ttgtctatgc tgagaataaa 360

tgtgaacggt gccctggac gctggattca tgctggtttt gg 402

<210> 323

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-B2

<400> 323

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cgcaaacgcg tgccaacgct ctgcgctccc atcctcccg tcttgaagg tctttctcaa 120

catggcctcc aagacggata agttccgcct ccaggcggag atcaacaagc tgctatcgcg 180

catcatcaac agcttctact caacaatgag atcttcctta aggagctcat ttcacactcc 240

tctgatggca tggataatat caggttcgac agtttgacgg acatgagcaa gctggatgcc 300

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gacattggca ttggtatgac 380

<210> 324

<211> 310

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-B5

<400> 324

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agttagatct agggactggg tgtcatcgcc agccattctc gccctgttcg acacggccgt 120

atcgatcttc ctctatctga cgctggtgct agactcactc gcagtcgcag tcggctatgc 180

gactgtcgga cgggcacaca acttatgcac ggtgtgcagc catcaatcgc gtcgacgagg 240

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ctgtcatgct 310

<210> 325

<211> 439

<212> DNA

<213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB143-005-Q1-E1-B7

<400> 325

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 gtggaggtga ccctaattggc ggcgcacaag ctttccagct caaccccaat gttccactcc 180  
 tcaccaacgg gcagatggtg gatgacatcc caccggagca gcacgcgctg gtgccttctt 240  
 tcatgggtgg tgggggaaag aggatacatc cccttcctta tgcggatccc agcttacctg 300  
 tgcaaccag gtctatggac ccatccaagg atcttgctgc atatgggtat ggtagtgttg 360  
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 atgattgtgg tggatgatga 439

<210> 326  
 <211> 141  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-C11

<400> 326

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 tttttttttt tttttttttt tttttttttt tttttttttt tttttttaaa gttcaaaatc 120  
 gcgggcggcc gccctagagg a 141

<210> 327  
 <211> 177  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB143-005-Q1-E1-C4

<400> 327

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 tctactgtat actgcacacg aaccaccgc tgccggcgcg ccgctctaga ggatcac 177

<210> 328  
<211> 81  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-C5

<400> 328

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aaaaaaaaa aaaaaaaca a 81

<210> 329  
<211> 212  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-C6

<400> 329

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tcttgcgagt gggaacatcc ggggtggccgc gctagaggat caaaccttat ctacgcttac 120  
agtggtcggt cagtactctt cgataatgcc acggagcttc tgttcacagg gtttcgtttt 180  
acgctatcgt tacgggggagc acgttctctt tc 212

<210> 330  
<211> 456  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-C7

<400> 330

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cagattaaat gatcttgatc tgcagctaag gaaggagaaa gaggaatgcc acaggatgac 120  
ctcaaaaatt aaaaagttcc ttaaagccca tgctcgcttt ttgaaagcac aggaagaatt 180  
gaaaaggcca caagctcggt ttgagagact cggtgattta cttgcttcag atattctgaa 240  
acgtggtgct aatgaagaag tttctagtat caatgttgat gaagatccaa atgttcctta 300  
tgaaaggagc ccaaatgctg ctatagctaa gaagagatca ataccatact caacaagtga 360

agaagcgaaa gccgtgaaga aaagaagaga gcgggactct gacacaacta ggccagataa 420  
 atataggttt gaaggtacta ttgcaggatt tgaaaa 456

<210> 331  
 <211> 418  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D12

<400> 331

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 aggcctggag gaagaagcga aagtatgagc ttggtcgcca gccagccaac accaagttgt 180  
 caagcaataa gacagtgagg agggtcctgt ttcgtggagg taatgtgaaa tggagggctc 240  
 ttgccttga tactggtaac tactcatggg gaagtgaagc tgttaccgcg aagaccgta 300  
 tcctcgacgt ggtctacaat gcatcaaaca atgagcttgt gaggacacaa acccttgtga 360  
 agagtgccat tgtgcaagtt gatgctgcc cattcaagca gtggtacctc actcacta 418

<210> 332  
 <211> 441  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D5

<400> 332

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 tggcgaagga gttttggaag tagatggagg cgtaaactgg actgatgttc atagatggat 120  
 ccgctttttc gggagattac tttctatact ctccatttcg attttgagtc gggtcggtat 180  
 cttcccttgt tgattagtgc cgctgctttg cgctccgtg ctgcagata ccttgggctg 240  
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 tcggtttgcg gtttagtctt cctgcgattc tagttttcgt gtggatcctg tttcgtcctc 360  
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 cgtcgggtgg cgaggagttg g 441



<210> 333  
 <211> 452  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-E11

<400> 333

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cccaatgccc ccgcccaggc aaccagctta ttgaagcatg taactggcac cgcaagtttg  180
caaggcaatg cggatagctt gttggatggt acagtcagac attttggtc agcaccgtct  240
gccagcctg aagaaaatgg gttcaagggc cacggcatgc tggcgccctt tacagctggc  300
tggcagagca atgatttgca cctctgac attgagagat ctgagggttc ctatgtctat  360
gacattaatg ggaacaagta tctggactct cttgcaggat tatgggtgcac agcttttaggt  420
ggtagcgagc ctcgattact caaagcagct ac                                     452
  
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<210> 334  
 <211> 440  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-E5

<400> 334

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gccctttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  120
tttttttttt tttttttttg gttttttttt ttttttggtt agggcaaaaa ggggtttccg  180
gttgaccctc ccgggggtttt gcaattgtcc ctcccagag ttcaacaaac ccgcatttta  240
ttacgtaggc caccctgtcc cagcataggc acgattaaat gtcccttacc aggctgttca  300
cgttgcgctt ttcagggggg tacacgtcca taatttttgt ggggcattcg tccttaattc  360
gatggctgca atggccaact ccatgttcat tttggaatcc tggtcctctg ccctatgagg  420
cgtgcatgtc ttcaaagggt                                     440
  
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<210> 335

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 <213> Zea mays  
  
 <223> Clone ID: LIB143-001-Q1-E1-A1  
  
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 cttcactccg gcattccatc catatccatc catcagaatt ctcaagtctc acagcagcaa 120  
 ggcgcacgac cagcaccagc agccggcaac aaaagacaca gcagcgatgg cgttcgtgcc 180  
 ggtgtgcgtg cagtgcggga cgcgagcaa cccgtgccgg tgcaaggtgg tcgggcccgc 240  
 gctggggttc gtcgcgttcg tgggtggccg ggtcatcgaa tggccgctgg gggccgccgt 300  
 gtacctgttc cgccaccgca agggacgacg catcat 336

<210> 336  
 <211> 418  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-001-Q1-E1-A10  
  
 <400> 336  
  
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 ggtggccccg cagcgccctgt tccgcgccgc cgtgatggac tggcacaccc tggcgcccaa 180  
 ggtcgccctc cagctcgctc ccagcgcgca gcccgaggag ggcgacggcg gcgttggcag 240  
 cgtcaggcag ttcaacttca cctcagtcac gccgttcagc ttcatgaagg agcgtctcga 300  
 gttcctcgac gcggacaagt gcgagtcaa gaacacgctc atcgagggag gcgggatccg 360  
 cgtcgccatc caaacggga acttgcaaaa tcaggggtgg accccgcggc cggcggcg 418

<210> 337  
 <211> 424  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB143-001-Q1-E1-A12  
  
 <400> 337

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attcaatcat tacaatgatg catttggcca ccgaatcaac aaggatctga aggctgaccc 120  
ccaggacgag tacctcagaa cgctgcgggc gatcatccgg tgcttcagtt gccctgacag 180  
gtactttgag aagggtggcta ggcaggccat agcggggcta ggcacagatg agaactccct 240  
gaccagggtc atcaccaccc gcgctgaggt ggacctcaaa ctgattaagg aggcgtacca 300  
gaagaggaac agcgtgccgc tggagcgggc cgtcgcgggg gacacctccg gcgactacga 360  
aaacaagctc ctcgcgctcc ttggggcagg attgatgagc cgtactgggt cgctgggtgcc 420  
tttc 424

<210> 338  
<211> 326  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-A2

<400> 338

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tgctctgctc catagaagat gaatgaagag agagatgggt aagaaggctt tggcaaattg 120  
caattgccgc agcaagccat gtcggcgcca ctgaccggct tagtgattgg tataatttgg 180  
tgtggcagca gccaggatta atgcgctggt cttttatctt tactactagt ttggtctcgt 240  
ccggtatctt atttttcttt ccccttttcg agtctgtact gaaactgctg agagatttgc 300  
agttttgatc tatcatatcc tttggt 326

<210> 339  
<211> 362  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-A4

<400> 339

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aagcgcgcgg tatgcaaaca aggatggatt cgagtgacca cggcgaccgc caaggtccga 120  
gagcctgtga agaattgccca ggcaagatgg ataacgaccg tgccgatcgt caacgcttga 180

aagcctgcga attcccagcc aagatggaca acaaccatgc cgatcgtcaa gtttcgaaag 240  
 cctgcgaatc gaaaggcaat gcctgtgaat tgccaggcaa gatggataat gaccaccccg 300  
 tccgtcaagg tttgaaagcc cgtggactac tgcaacctaa gtcggatgcc agtggaggtg 360  
 gc 362

<210> 340  
 <211> 51  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB143-001-Q1-E1-A5  
 <400> 340

tactggtcaa gcattcccgg gcccaaccac gcgtcaggcc gctctagagg a 51

<210> 341  
 <211> 351  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB143-001-Q1-E1-A8  
 <400> 341

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 acacgaacgt gtacagccag ggggaagggcg ggcgggagca gcagttccgg atgtggttcg 120  
 accccacggc ggccttccac gcctactccg tgctgtggaa ccccgcccac gtcgtcttct 180  
 acgtggacgg cgtccccatc cgggagttcc ggcgccgcgg cgacgggacc gtgccgttcc 240  
 cgacgtcgca gccgatgcgg gtgtacgcca gcgtgtggga cgcggaggag tgggccacgc 300  
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<210> 342  
 <211> 398  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB143-001-Q1-E1-B1  
 <400> 342

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ggacgcgtgg gaggagctca cggtcgagga ttttctttat gatgatgatt acaagataga 120  
tctttctggg tctaactctgg atgtcattaa taacctagaa gggattgttc agctggaata 180  
tccagatcac aatttgccgc aagggttagc ccctaattgca taccttgaca tgaatagttg 240  
tgggcagagt gccggggctg ttttcttgca catgccagat ttgctcacia caatgacttc 300  
agcaccttct gcattcctga agccaaaatg cgctctctgg gactgcccc a ggctgctat 360  
tggatcagaa agatggcata attattgcag catgtatc 398

<210> 343  
<211> 425  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B10

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tagcgaggac gaggccgccc cgctccgag atacagcggc cgcacgagc tcgcgccaga 120  
ggtttacagg atggacaaga tcaaggcgga gatgaagaac ggcgtgctca aggtggctcg 180  
gccgaaggcg aaggagcagc agcgcaagga cgtgttccaa gtcaacgtcg agtagatgtt 240  
tccaaataga agcaagtgcc ggtacgggat ggaggattgg aggggcaactg ccaaactagg 300  
attcctctct ctcaatctga tctggattct ggaatcagat ttctcttctt tcaattttct 360  
ccgtcaacct ccaacaatta tgaattaagc aacgtcgctt cagttttcgt gtcaaggccg 420  
gtgga 425

<210> 344  
<211> 453  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B11

<400> 344  
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cagagccttc cttctggtga aagcaaggat gatagtccg tgctgatag agcacagttc 120  
aatagagacg atttccctgt tcagtatgat gctgcaaagt tctttgtcat taaatcgtac 180

agtgaggatg acatccacaa gagtgtaaaa tacaatgtgt gggcaagcac aaccaatgga 240  
 aacaagaagc tcgatgctgc ttatcaagaa gctcagtcga agggttctgc gtgccctata 300  
 ttcttgTTTT ttctcagtga tacaagtggg cagtttggtg gtgttgctga aatgacaggg 360  
 gctgtcgatt ttgagaaaac cctgggggat tgggaacaag accagttgaa atggttcctt 420  
 ctctgttaag tggcacattg tcaaggacgt gcc 453

<210> 345  
 <211> 142  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B12

<400> 345

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 ctgtgtaacg tgctcgcggt catgtccgtc tcgtgccgga attaatatTT atatgcatgt 120  
 atttgtgttt ttctgcgtta aa 142

<210> 346  
 <211> 379  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B3

<400> 346

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 agtggtagca tcataacaag taaagatggt gaagttcacg gctgaagagc tccgtgccat 120  
 catggacaaa aagaacaaca ttctgtaatat gtctgttatt gctcatgtgg accatggcaa 180  
 gtctacactt acagattccc ttgtggcagc tgctgggatt attgcccagg aagttgctgg 240  
 tgatgttcgc atgactgata ctctgtcaga tgaagccgag cgtggcatca caatcaaatt 300  
 tactggatc tctctttatt atgagatgac tgatgagtca ctgaagaact acaaggggtga 360  
 gagggatggt aaccaatac 379

<210> 347  
 <211> 371  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B4

<400> 347

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ccacgcgtcc ggcgattcga gttaaaaaag aacatacac atcatatcac caggccaggg 60
cacgcacaag cgagctgate tgcagcatta tttggctgat tttttaatca ttgacggcgg 120
gcgaacatat ggcggatgac tcgttcgacc tcccagcgc tagcgaggag gaggtgatgg 180
gaggcctgga tgaggacgag gccatgaagg acctcgagac cgggatggac gatgaggact 240
at ttgccacc gacgatgaag gttggggagg agaaggagat cgggaacgag gggctcaaga 300
agaagcttgt caaggagggc gaggggtggg atcgccccga gcttggagac gaggtggaag 360
tgcattacac t 371

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<210> 348

<211> 377

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B6

<400> 348

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tcttataagc tactactagt tacaagctgg tttatatatta actacaagta gcaacgattt 120
gtcttagtat atatggttca taatacatat atattggaac tgagataata tatgcaggag 180
tacagtgttg atccatggac tcggaaggag ttgtagcagc aaaggtggca gatgagacta 240
ctaaaccggc aatccaagaa gacggcgccg agagcaaggc cgggatgact gatctgctga 300
tgctgaccga caagtcgcag ctgcaggcgc tggcgatgct gctgcggaac aacgaggagc 360
tcatgatgag ccaggcgg 377

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<210> 349

<211> 374

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B7

<400> 349

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aaaagcacac catcgtcatt gacggcggat actacggcgg tcgcgatcag cgctacagcg 120  
gcgggtacta cggcggcggg ggcattcgaa cgccggggta cgctccggcg gtcccgtagc 180  
ggatgtcgca ggtgaacatc gagggcaacg ggtgcggggc ggcgctgccg ccgcagccga 240  
ccgtgaaggt gtactgccgc gccaacccca actacgccat gagcgctccg gacgggaagg 300  
tggtgctggc gccggcgaac cccaaggacg agtaccagca ctggatcaag gacatgcggg 360  
ggagcacgag catc 374

<210> 350  
<211> 441  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B9

<400> 350

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ataccctgac cggaccccca tcccgcggcg gtcgcgcgga atcgcgggcg tcaaagccta 120  
tacgccaccc cacctcacgt cgcgcgcggt cgccgcgggt tccgcgtgct agtgctctcg 180  
ggagctcgga tcagaggggc gggctagggt tcgccaatcg ccagcgtggg tgctgccgtc 240  
gggcgcggcg ggctgagtag tacgaggaga gatggacgcg ttctctgaca ggctcaagcg 300  
gctggacgcg taccccaagg tgaacgaaga tttctacaag cggacgctct ccggaggcat 360  
cgtcacgctc gtcgcgcgcg tcgttatgct gctctcctca tctccgagac aagtcattat 420  
tttatcgtc aacagagact a 441

<210> 351  
<211> 451  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-056-Q1-E1-E4

<400> 351

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taccctgagc aaatcccttc ctggcttggt gactggattc ctgagaaagg aggttacctt 120



atanggaatc tgcagccagc tcacatggat tttaggttct tctctcttgg caacctttgg 180  
gccatagctt cgtctctaac tactccaaaa caagctgagg gaattcttag ccttattgaa 240  
gaaaaatggg atgatcttgt agcaaacatg cccctgaaga tatgcttccc tgcaatggaa 300  
gatgatgaat ggcgcattat tactggcagt gatcctaaaa ataccctatg gtcatatcat 360  
aatggtggat cttggccaac cttattgtgg cagttcacat tggcctgcat aaaaatgggc 420  
agaccagaat tggcccgag agccattgct g 451

<210> 352  
<211> 435  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-E7

<400> 352

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tatggggcaa gccttccac ggcttgtcct cctcgccctc gtggcggttg tgtctgccgg 120  
cctcttcccg caagcgtag ggaacggcaa gggcaagggtg catggcggtg gtgccgtcaa 180  
cccgctggtt gccggcatct gctctcgcg cccattccca gaggtttgca cggccacagc 240  
cgggcgcat gcaccaagt acccggtcat cgaccatttg gccgtgctga acatgcaggt 300  
ggccgcattc gccaaagcga cagcgcaggc gcggaagcac gtcgcggtgg cggcccgcac 360  
tattccaccg ccgcaggcac aggcctcag aacctgcgac acgatgtaca tgaacacgca 420  
ggacgccatc ggcg 435

<210> 353  
<211> 430  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-E8

<400> 353

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caggcgtag ggaacggcaa gggcaagggtg catggcggtg gtgccgtcaa cccgctggat 180

gccggcatct gctctcgcg cccattccca gacgtttgca cggccacagc cgggcgcat 240  
 gcatccaagt acccggatcat cgaccatttg gccgtgctga acatgcaagt ggccgcgttc 300  
 gccaaagcgca cagcgcatgc gcggaagcac gtcgcggtgg cgggccgcac tagtcgagcg 360  
 ccgcagggac aggcctcag aacctgcgac acgatgtaca tgaacacgca ggacgccatc 420  
 ggcgcgcgcg 430

<210> 354  
 <211> 472  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-056-Q1-E1-F1

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 ccccttcctc agcctgtacc agagcgacaa cttcccttc gagttcgct tcttcgacgg 180  
 cggcaagaac atccaggaca agggcgcggt cacctactcc aatgtgttcg acgccaacta 240  
 cgacacgctc gtgcacgcgc tgaagaaggc cggcgtgccc gacctcaagg tcatcgtcgg 300  
 cgaggccggc tggcctaccg atggcaacaa gtacgccaac ttcaagctgg cgcggcggtt 360  
 ctacgacggg ctcctcagga agctggccaa gaacgaaggc acccgggtcc ggaagggcaa 420  
 gatggaggtc tacctgttcg gcctattcga cgaggacatg aagagcatcg cg 472

<210> 355  
 <211> 367  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-F10

<400> 355  
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 ggtcgccatg ctacgggtgg ccgctgatgt cgccaacgcc ggccaagcga atcctgtgac 120  
 gcctgctggg cgcgtggtac acgatcatca cggtaagttc acaggcgggc cgtggaaaca 180

ttcggacgcg accttctact gctggcggga cagggtccgc acctctgcgg gcgcgtgcgg 240  
 gtaaagcgac acgtacgcgc aggggtacgg tgtgcaaacg gtggccgtga gcacggtggt 300  
 gtttggcgac aggacggcct gccgccggtg ctacgaagtg cgggtgcgtgc acagctccag 360  
 cgggtgc 367

<210> 356  
 <211> 256  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-F12

<400> 356

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 ggatgctgtc gtatgataag ttgctcagct gcaaggtgct gggcaactgc gacaagaaca 180  
 ggggccccgg ggccaccgc cgggggaagc ccgtaaaca gtacaccgc ggctgcagcc 240  
 cgctgacccg gtgccg 256

<210> 357  
 <211> 450  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-F2

<400> 357

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 accaaataag gtcccgccct tttccgacat tcacaggggg gacaggaaat cagcggccat 120  
 ggctcgatt ccggcgacga cttcgccgt catcttatcc gtctcttct gtgccgcggc 180  
 tggcaccgcc gtcgacaacg acctccccga ctacgtcatc cagggccgcg tctattgcga 240  
 cacctgccgc gccgggttcg tgaccaatgt caccgagtac atcgcgggcg ccaaggtgag 300  
 gctggagtgc aagcacttcg gcaccggcaa gctcgagcgc tccatcgacg gggtgaccga 360  
 cgggaacggc acgtacacga tcgagctcaa ggacagccac gaggaggaca tctgcgaggt 420  
 ggtcttggtg gagagcccg cgaaggactg 450

<210> 358  
 <211> 442  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-F6

<400> 358

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gatgcccggc acggcgccat gggcagcggtg caggacgagc cgcggcagca gcgccacgat  180
gactatcacc accccgagat cgtccccgag aagatcatat acgaggacgc gttgccggtc  240
gttgctgcgg agaaggagac tgccgccgcc gccgcaacct cgaaggagga ggaggagggtg  300
gagtcgcca agaaggagc ggctctgtcg ccggtgccgg aggctatcgt catcgccaca  360
gccgcaacct cgaaggagga ggaggaggag gtggagtcgc ccaagaaaga agcgggtctg  420
tcgccggcgc cggagcctat cg                                     442
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<210> 359  
 <211> 433  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-F7

<400> 359

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gtggccaggg gtggagtgat cgacgaagac gctctgggtc gggcgcttga ctccggcaaa  180
gttgcccagg cggctcttga tgtcttcacc gtggagcccc cgcccaagga cagcaagctg  240
gtgttgcatg agaatgtcac tgtaacaccc caccttggtg caagcactgt cgaggctcag  300
gaaggcgtcg ctatcgagat tgccgaagcc gtggttggtg cgctgagagg ggagctcgca  360
gcaaccgctg tgaatgcgcc catggtccca gctgagatcc ggtcagagct ggctccatat  420
gtttctctgg ccg                                     433
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<210> 360

<211> 159  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-056-Q1-E1-F8  
  
 <400> 360  
  
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 cccggcgccg ccggcggttg tggaatcgat tgaaccggtc atcccggaga atctaaggac 120  
 gttggtttca cctcacgttt ttgtgcatgg aatatgagg 159

<210> 361  
 <211> 444  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-056-Q1-E1-G1  
  
 <400> 361  
  
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 aatcaccgcc ctggctccta gcagcatgaa gatcaagggtg gttgctcctc cagaaaggaa 120  
 gtacagtgtc tggattggag gatccatcct ggcatcgctc agcaccttcc agcagatgtg 180  
 gattgccaag gctgagtacg acgagtctgg cccgtccatc gtgcacagga aatgcttcta 240  
 attctttggg cccaagagat gcaaagccga gaggagccat tategccagc ctcccgcccc 300  
 gtttctttct ccttttggtg ctgtttcttc attagcatga acaaagtttt ctgccggtct 360  
 gtcggcagcc gctttctcct attcatcaag actgtaatgt ctattgttgc tacctaatgc 420  
 ttctcacttg tcattttgga caca 444

<210> 362  
 <211> 438  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-056-Q1-E1-G10  
  
 <400> 362  
  
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 atcttccagt gccccgagat cttcgtgagg cctgaccggc ggacggagat ccgcggtctc 120

atcaccgcgc aggtgcggca ggaggaggac agcagcggct tcgtcttcct caagggcaag 180  
 gtgtacggcg tcggggaggt gtacctgggc cgcgtcacccg cgccggactc gcgcgtcatc 240  
 ttccgacgaca cctacctctc caagaccatc caccggcccg gctggacaac catacgtac 300  
 agcggcagca ccgacaaggt gacgctcgcc gagttcaact gcactgggcc gggcgctgac 360  
 gtgacgaacc gcgtgccatg gtcgcagagg ttctctcgcg acgacgcggc caagtacctc 420  
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<210> 363  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-G11

<400> 363  
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 tcttcgagtg ccccgcgatc gtcgctgagg cgtgaccggc agacagacat ccgcggcgcc 120  
 atcaacgagc aggtgcggca ggaagatgac agcatcggcg tcgccgtcct caaggggaat 180  
 gtataatgtg tcgaggaagt atagccgtga ctcgtcacag cgccggacgc gcacgtcatc 240  
 atcgctgtga ccggagtctc cagcacgatc cagacggccg gcggggcagc gatacgcc 298

<210> 364  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-G3

<400> 364  
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 tccaaggttt tgcaagacaa gcgtgtgtgt gagagagaga cctgcattgt ttggtcgcca 120  
 ctactaccat gcgcgatggc cgcgtcgctg tcctcgggcg tgagctccat ggaggtgatg 180  
 ctggacgcgc tcatgcagcg agggataggc aagccggaag aagccagcag caagcccaaa 240  
 gaagaggagc cgccaccggc gctgcccagc cgcccgacgg ggcgaggcag actcccggcg 300  
 ctgcataggc ccggcggcac agcagcggct ccgtggatcc accggccatc cccggtaccg 360

cagccaacgc aggaagacga tcaggagaca tgtctggctg gtcaggagct ggaaagacgg 420  
gcgggc 426

<210> 365  
<211> 434  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-G5

<400> 365

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catgctcacg gaggtgtcca ggccgcctta catcccgccg ccggccgacg aggacctgc 120  
ggacgtcgaa gggttcgacg tgaggggcca cttcaaggac cttcaccagc cggcgctcc 180  
caagtccgcy tcggagtcgt cctcgtccga gttctcgacg gagttctgac tgtgagctcg 240  
ggctagcttc ttttgcgctt tggctctcgg tagattacta tattgtaacc agagggtcga 300  
gggtgtctgt actgtacata catggagacg gggatgggtgc tgtaaattcg acgtagagtt 360  
ggtgtggttg tgcaaacatt ttgggaagcg cgagggtcgc ccggcgccact gtgctcgagg 420  
cattttcttc gtgt 434

<210> 366  
<211> 464  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-G7

<400> 366

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cagatctgcy gttgtcacac atcgcatcga ggttgccggc cgcgccagcag ttttcagcct 120  
gttcagattc ttgaggaaag cgagacgaag gatggcacgt gtttcaggga ggctgtccta 180  
tgtcgtgttt ctctctctca gtctcagcag acagtgggaa ccgatcgatg ccatcaatgg 240  
gagtagccat gcccatgcat gccttgataa tgggtaaagc gacacagcag gaggacgggtg 300  
aagaatgagg agagggtcac ggataaggaa gagagtcaat gcttatcgcc gagtctccag 360  
ttcaagggtc tctgctgtaa tagcgataga tgcgccgagg tgtgcatgaa gtgagagctt 420

tcgcggtggc gagtgcaggc gggacgtggg catgcacagg tgct 464

<210> 367  
<211> 442  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-056-Q1-E1-G8

<400> 367

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ggcgatgctt ctcatcacgc tcgtgctgga ggccgcccct ccggcgaccg ccatggactg 120  
caaggccggg tgtgacgagg tcacggggcc actccacatg agcatggagg actgcatgaa 180  
gaggtgcaag gagatcgctg ctaagcaggg gcctagggac cttacaagg ataacaaact 240  
tgacatccca tgaactagtt aatgtccta tatcatctgc ctatccatgc atgcattgca 300  
ttgcgtatgc aactgtgcg tgcttccca caaagttcga caacacaccg atctcgatgg 360  
atgtgtaatc gtgtccactc gatcgagaga tcgatcgatg cttgttanta tatttgtatt 420  
ccacattata tataagaaat ac 442

<210> 368  
<211> 477  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-H1

<400> 368

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ccttcttgag agcaaaaagg tctcaaagtc tcttgagagt gacttttagca ataaaatgaa 120  
ccagctgttg ctaatagttc tgcaaaaaca aaggcaacaa cagatgatgg atgggttttg 180  
aggatactat gatgaatgca tgtactggag acaaaatgat gaaattcatg atgctcataa 240  
ggaggcatct gtcctatgtt catcagctcc tgtctcacat cttggtgctc atcagcaaga 300  
gtgttggcag cactcttcat atggaagtca acatcacgat aacaaaaatt tacttgaaat 360  
ggaagtcagg gtaaggggtg aaatgtccca gattcaacat gaaatatatg aactgcagaa 420  
gttgggtgaa agttgtattg catccaagt aaagatgcag cactccatta aagaaga 477



<210> 369  
 <211> 196  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-H3

<400> 369

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 tcgatcgtaa caatgcaaag ttgtgttgta tataactctt gtgtttggaa tgccgcccgt 120  
 aagtaatggt caactctaac actgcttgcc aaaaagaaaa agaaaggaga aaaaaaagg 180  
 gggccgctct agagga 196

<210> 370  
 <211> 442  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-H5

<400> 370

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 catcttgcta ataagcctgc gtgcccttcg ttcttctctg tctcgatccc gacgacgctc 120  
 cgttcggtc cggaacaacca catcaagtcg cgatggagat gaagaaggtc gcctgcgccg 180  
 tcctcgccgc cgccgcctcc gccaccgtgg tcctcgccgc cgaggccccg gcgcccgcgc 240  
 ccaccagcgc ctctcggcc gcgttcccgg ccgtcggcgc cgtgctgggc gcctccgtgc 300  
 tctccttctt cgctactac ctgcagtaaa attaaaggag gatcggaggg agaggctgct 360  
 ggctgcgatt gcctgtattc ggttggattc ggtttatata tatatttaag tacttttagtt 420  
 tgggtctgaa catgtcgatt ga 442

<210> 371  
 <211> 462  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-H7

<400> 371

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 gacaaaacat ggatgtgaat gtgagaacca tgtggtcgtc gatgcgggca cagggtgcga 120  
 tggctgtggt gttggtgttc ttggtgagcg gcgcattggtg cggtcctccc aaagtcccc 180  
 caggcaagaa catcacggcc acctatggca aggactggct ggacgctaaa gcgacatggt 240  
 atggcaagcc gacgggtgcc ggtcccgacg acaacggtgg tggctgcggg tacaaggacg 300  
 tgaacaagcc ccccttcaat agcatgggcg catgcggcaa catccccatc ttcaaggatg 360  
 gtctggggtt tgggtcctgc ttcgagatta agtgcgataa gcctgtggag tgctccggca 420  
 agcccggtgt ggtgcacatc acggacatga actatgagcc ta 462

<210> 372  
 <211> 425  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-056-Q1-E1-H8  
 <400> 372

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 ttctcaagac ttatttgccc ttgacaagac tggatgggaa ttggcactgg ttactgcacc 120  
 aagtaaccac acaaatcaac aagtggacaa tcaattggct gggggatttg acaagctatt 180  
 gctagacagt ctttacgaag acgaggcaag gaggcagcaa atagccagtg tgacctacac 240  
 tggaagtact gcagcaaacc catttgacca cagtgatcca tcttgcaaag tcagcccatg 300  
 ggcagcgccg ctcttgacga gcttccgctg ggggccaaga gtcaccac ctccgacgcg 360  
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 gacga 425

<210> 373  
 <211> 437  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-056-Q1-E1-H9  
 <400> 373

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gccgcgtgac cggccgcaag agcttcgccg acggcatcac caccatgaag accgccacct 120  
tctccgtcga ggcggtccggg ttcattctgca agaacaatggg gttccacaac acggccggcg 180  
cggagcggca ccaggcggtg gcgctccggg tgcaggggga cctcgcgggc ttctacaact 240  
gccggttcga cgcgttccag gacacgctgt acgtgcacgc gcggcgggcag ttcttccgca 300  
actgcgtggt ctccggcacc atcgacttca tcttcggcaa ctcgggcgcg gtgttccaga 360  
actgcctcat catcacgcgg cggcccatgg acaaccagca gaactcgggt acggcgcacg 420  
ggcgcaccca ccccaac 437

<210> 374  
<211> 431  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A10

<400> 374

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gcaggagatt gagtgcgtgt tgccttaagg gtagactgcg caggtgaggt gacaaagagc 180  
atgcactgca ctgcactgca ccacatatgt gcatcgaagg ttgaagacga ccagcacctc 240  
cggtcagaag agaggaagga gaggcggctg gagaaagaga gccaggtcag caggggtgttc 300  
aaaccgccgg cggtagcaac gaatcttctt ctttttcttc ttttgcttga atttatgcct 360  
tgtgacgtgc atctggaggc acgactgatc acaaaagaat acgagttttt ttaaagtaac 420  
gcagcgcgaa a 431

<210> 375  
<211> 411  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-057-Q1-E1-A11

<400> 375

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cagctgtctc aagattgaag catgagaatg ttgtccaact cgtcggatac tgcgccgaag 120  
ggagcacccg cgtccttgct tatgagtatg caactagggg atcattgcat gatatacctc 180  
atggtaaaaa ggggtgtcaaa ggagcccagc cagggccagt cctgtcatgg atgcagcgag 240  
ctaggattgc cgtatgtgct gctcggggtc tcgagttcct ccacgagaag gccgatacctc 300  
gagtgggtcca ccgcgacatc aagtcaagca acatactgct ctttgaccat gatgttgcca 360  
agatcgggga cttcgacatc tcanaccagg cccctgacat ggctgcgcgc c 411

<210> 376  
<211> 408  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A5

<400> 376

aagtcccagg ccgacctacg ctgtcaagga ctggccggac gctaaagcga catggtatgg 60  
caagccgacg ggtgccggtc ccgacgataa cggtggctgc tgctggtaca acgacgtgaa 120  
caagcccccc ttcaatagca tgggcgcgatg cggcaacatc cccatcttca aggatggtct 180  
gggttggtggg tcttgcttcg agatcaagtg cgataagcct gtggagtgtc ccggcaagcc 240  
cgtggtggtg cacatcacgg acatgaacta tgagcctatc gcggcgtacc acttcgattt 300  
atcacgcact gcgttcggcg ccatggccaa gaagggcgat gaggagaagc tgcgcaaggg 360  
tggcatcatc gacatgcagt tccgaatggt taagtgaag tacgactc 408

<210> 377  
<211> 418  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A6

<400> 377

ccacgcgtcc acgatcacga caagatggca tgcacaaaca atgcgatgag agccttgttc 60  
ctcctggtcc tcttctgcat cgtgcatggt gagaaggaag agtcaaaggg catcgatgcg 120  
aaagcgtccg ggcctggtgg gtccttcgac atcaccaagt tgggcgcctc cggcaatggc 180  
aagacagaca gcacgaaggg tgtgcaggag gcatgggcat cggcgtgcgg cggcactggg 240

aagcagacaa tctcatacc caagggcgac ttccttgctg gacaactcaa cttcacaggc 300  
 ccttgcaagg ggcacgtgac catccaagtg gatggcaatc tgctggcgac cacggaccta 360  
 agccagtaca aggaccatgg taattggatc gagattctac gcgtggataa cctgggtca 418

<210> 378

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A7

<400> 378

ccgggcccgc ccacgcgtcc acccacgcgt ccgcccacgc gtccgaccgg cgtcaccatg 60  
 gatgacgtca acgtcgagta tagcggcacc aacaacaaga ccatggctat atgcacgaac 120  
 gccaaaggga gcaccaatgg ttgcctcaag gagcttgcat gcttctagac cctccgtcga 180  
 ctgacccatc tctctagtta taatttttct ctcgtccttg cattgcatat tagttgctat 240  
 ccattggtaa cgcacaacag tcctacgaca aacatccaac atctatatta tgttcgacag 300  
 tgtaacaccc tgaacttttag ggtataaaat ttcttcttta aatgcaaacc aaattcaggt 360  
 gttacctctt gtctctctct cgatcatttc cttttgatta aaagtaagtg aa 412

<210> 379

<211> 338

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-057-Q1-E1-A9

<400> 379

gcgtaggccg ttgcaacacc ctatagtgag tcgtattata acanggagga actcctcatc 60  
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 gcccgagcat ctgggacaat ctgctgtaag gttcattgct agatggagtc gtccgtggac 180  
 tgctactgat tataattcgg aagcatgagg tggtaaagaa cttgagcgta gctaaccgac 240  
 atgttcacag gctgaaccgt gagagtggct gcgcattatt gtacactcag cttgagacac 300  
 attgccattc ggaagagctt gcacgattca tcgatgtt 338

<210> 380  
 <211> 431  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-B10  
  
 <400> 380  
  
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 caccggcaac accagcgccg gcagcaaggt cctccggagg aagccctcct ccgtctccac 180  
 cggcgcaagc cacacatcca ccacgtcgcc gtcgtcctcc ggcgtcgtcg tcaaggacgt 240  
 cgtgaaggat gcggcgggcg ccggcggaagt gatgacgcc gccgacgccg aaaagcctat 300  
 ctctgtcgac cccaaggcag acgccatcgt ggtgatggac gccaagaaag aggagggcat 360  
 caacaacgtg agcgtggagg aggatctgcg tcctgaatcc accatggtcg acgacgcgct 420  
 tgctgtggaa g 431

<210> 381  
 <211> 430  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-B11  
  
 <400> 381  
  
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 agctaagcag gtctgacagg atgtcgtggc agacatacgt cgatgagcac ctgatgtgcg 120  
 agatcgaggg ccaccacctg acctccgctg ccatagtcgg ccacgacggc gccgtttggg 180  
 cccagagcac cgcattccca cagttcaaga cagaggagat gaccaacatc atgaaggact 240  
 tcgacgagcc cgggttcctt gccccgaccg gcctcttcct cggccccacc aagtacatgg 300  
 tcatccaagg cgagcccggc gctgtcatcc gcgggaagaa gggatctgga ggcataactg 360  
 tgaagaagac agggcaagcg atggtggtcg gcatctacga cgagcccatg acccccggcc 420  
 agtgcaacat 430

<210> 382  
 <211> 306

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-B12  
  
 <400> 382  
  
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 gatgtcgtgc cacagatact tccacaaccg actcatatga cgacgattaa tggccatcac 120  
 ctgcactccg ctcggaatag tcggccatga aagacgccgt gtgggcccga agcaacgcat 180  
 tcccaaagtt cagaagacac gagatgatca agatcactga aggacttcga cgagccccgg 240  
 ttcccttgac ataacgggat cttcgtccga cccaccaact agatgggtcat ctcaacgcga 300  
 acccgg 306

<210> 383  
 <211> 151  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-B4  
  
 <400> 383  
  
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 attggatcat ggaccgagtg ataaggatca t 151

<210> 384  
 <211> 58  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-B5  
  
 <400> 384  
  
 aacaccctat agtgagtcgt attaagcaga acaatggccg gccagaggca gccacggc 58

<210> 385  
 <211> 322  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-B6

<400> 385

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ctggtacaac atggctggtg atggcatgga ggtatctgcc agcgggggtg gcggcggcaa 120  
caagcagccg cagatcagcc ttttggggct gttcctcgtc tgcgtcgcca tggccttggt 180  
caccgtcctc agtcctggt ccctcggcga catccggggc aacgtgcacg acgccgccgc 240  
cgtggataag ggcctcaaga ccagcgcgct cgccatcttc gtcttcacg gttccatt 300  
cccgtccta cgcagcgttc cg 322

<210> 386

<211> 108

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-B7

<400> 386

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ccaggcctcg ccagtcggcg ctcccagcgt cgctgacagg aggagcaa 108

<210> 387

<211> 179

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-B8

<400> 387

acaacaccct atagtgagtc gtattaacat gcgggcccc gacggtgacg cccggtccga 60  
acatcacat caccgaggca ggtgtctggg tcaacgctaa ggggagttgt ttgctgagc 120  
ccaaccagt cccgagatct gagactgttg gggatcgtgc agggccaca acttgatcc 179

<210> 388

<211> 121

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C10

<400> 388



cacccaatag tgagtcgtat tacgagtgtg gcgccatggg tggttgccac tctgctcatc 60  
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g 121

<210> 389  
<211> 413  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C11

<400> 389

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ccattggctcg ccgtctcggg ccatggcagg gccggcgccg gatcgggccg ccctgactgt 120  
gggtccgggc atggacatgc cgatcatgca cgacagcgac cggtaacgagc tcgtgcgcga 180  
catcggtccc ggcaacttcg gcgttgcccc cctcatgcgc gaccgcccga ccaccgaact 240  
cgtcgccgctc aagtacatcg agcgtggcga gaagatagat gagaatgtcc agcgcgaaat 300  
aattaacccat agatcattga aacaccctaa cattattagg tttaaagagg ttattttaac 360  
accgacccat cttgctattg tcatggaata tgcctctggc ggtgagcttt ttg 413

<210> 390  
<211> 311  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C12

<400> 390

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ggatttgtaa tcgtgtccac tcgatcgaga gatcgatcga tgcttggttat tatatttgta 180  
ttccacatta tatataagag atacagatta aattaaattt attccaaaat gcacgaacgc 240  
cgcaacaaag aactcatcac cgtcaagtac atcaaaacgt ggcaaaaggg cggccgctca 300  
agaggatcca g 311

<210> 391  
 <211> 202  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-C6  
  
 <400> 391  
  
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 gtgagacaga tccatcgatg catgatacga gagtcgagat ccacatggac cacaccaact 180  
 ccgagatcga ctgcgtgaac cc 202

<210> 392  
 <211> 278  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-C7  
  
 <400> 392  
  
 acaactccta tagtgagtcg tattatgcag ccacaggcag gcgtcggcac catgtcgtct 60  
 ttcaccggca cgcaggacaa gtgcgcggcg tgcgacaagt ccgtcgacgt cagcgacctc 120  
 ctcacggccg atagcgatca tcgatcaaag catatgcttc aagtgcagcc actgcagagg 180  
 gatccgctcg atgtgcagct actcttccac ggccagtgtg ctgtgctgca agaccgacat 240  
 cgagcagctc ttcaaggaga ccgggagctt caccaggg 278

<210> 393  
 <211> 338  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-C8  
  
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 accaacttca cgtacaagtg gcagcccaag gaccagatcg gcagcttctt ctacttcccg 180  
 tccatcggca tgcagcgggc ggccggcggc tacggggcca tcagcgtggt cagccgcctc 240

ctcatcccg tcccgttcga ccagccccc cgggagaacg accacgtggt gctcatcgga 300  
aactggtaca ccaaggagca cgaggtgccg gtgcgccg 338

<210> 394  
<211> 314  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C9

<400> 394

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tggtaatgga tgtaggcacg ggactcgctt cgatgacgac ggtacttcac gcgcagaact 120  
aggtagccct gctcactg gatcgaaacg tggatgtcca tatgacttct gagagccagc 180  
atgtacatc agaggcaaca acatattggg aaaattcacg atgtacatcg tgacgaaact 240  
ctcagagcag cattgaccgt atgaacagaa tgctgaacca tcatggttca tccatgcacg 300  
attcagagaa gctg 314

<210> 395  
<211> 330  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D1

<400> 395

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catgcccgtc ctcaaggac gcacgcccgt cgagtgtac accgacttca tgcgcgcgtt 120  
ccgcgaccac ttcgccgact acctcggaac caccatcgtg gaaatccaag tcggcatggg 180  
ccccgccggc gagctgcgtt acccgctcta cccggagagc aacggcacct ggaagtcccc 240  
aggcatcggc gccttcagc gcaacgacag gtacatgcgt agccgcctga aagcggcagc 300  
ggatgccgcc ggcaagccct gaggggggg 330

<210> 396  
<211> 243  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D11

<400> 396

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atctgggtggg gaagttctcg ctgtccgaca cctgcaggac aggggcggcc gaggcgatcc 120  
tgcagctgag gtcgatgggg atcaagtcgg tgatgctgac cggggacagc gcggcggcgg 180  
ccaagcacgc gcaggagcag ctcgggggcg tcctggacga gctcgactcc gggctcatgc 240  
cgg 243

<210> 397

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D2

<400> 397

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aacctttccc cttctccca attccctccg tcggccgccg ctccatcccg tacgacgaca 120  
ccatgagggga gtgcatttcg atccacatcg gccaggccgg tatccaggtc ggaaacgcgt 180  
gctgggagct gtactgcctt gagcatggca ttcaggctga cggtcagatg cccggtgaca 240  
agaccattgg gggaggatgat gatgctttca acaccttctt cagtgagact ggtgctggga 300  
agcacgtgcc ccgtgctggt tttgttgacc ttgaacccac tgtcatcgat gaggtgagga 360  
ctggcaccta ccgccagctc ttccaccctg agcagctcat cagtgggaag gaggatgcag 420  
ccaacaact 429

<210> 398

<211> 392

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D3

<400> 398

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tcccatcaga tcgatcgcg aagttcaact gaacatgcac acaagcacca gacagaaagg 180  
aaacaatgac gtaacggaag gcgacggctg tgcctcgaca aacaacctcg accagatcga 240  
aggagaacag tgcgtgtacc ctaccgtgca acagccacac acacgacacg ttacgttacg 300  
tacgtacttg ttccttatat aacatttgca tgcgatgcatg cagatgcatc tactacggct 360  
acttacacgg gcactgtgcg gttgtttag tt 392

<210> 399  
<211> 446  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D4

<400> 399

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agaggccata catcaagaag acatgctttc aatgatagaa aatgttttga gtgtggggaa 120  
cccggtcaca tcgcatgaa ttgccctaac aagaataaga atggcacaga tggagatgat 180  
aagaagaaga ataaattcta caacaggaag aaagatggca gagcctacct agttgaatgg 240  
gatttggata atagctcgga tgatgatgat gatgacacct catccaaact taatgccgga 300  
atggccatca atgaagcccc ttcacttttc tcatccctc attgtctcat ggcaaaggga 360  
gatgctaaga atgttacgtg aggccgatga ctacatggac aaagaaaaag aaaagtcat 420  
gaccttgaag gaattgtata aaaacc 446

<210> 400  
<211> 406  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D5

<400> 400

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gacgcgcttg gtatgacatc cagagagca cgtgtatacc tcagggtgac ctccggtgag 120  
ttaggaccac gtcgctgatc acatcatatc gatcgcgcac gttcactga acatgcacac 180  
agacgccaca cgcagaggaa acaatgacgt aacggaaggc gacggctgtg cctcgatcga 240

catcctcgac cagatctaag gagaacagtg cgtgtaccct accgtgcaag aggcacacac 300  
acgacacgtt acgttacgta cgtacttggc ccttagataa catttgcatg catgcatgca 360  
catgcatcta ctacggcgac ttacacgggc actgtgcggc tgttgt 406

<210> 401

<211> 151

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D6

<400> 401

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ttcaataata gaatctgttt tgagtctcgg caaccggtc aaatagccct ggagggacct 120  
aatttcaata cacaggggac agaccggtat c 151

<210> 402

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D7

<400> 402

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ccatccagta catcgattct ccccccaaga tcaaaggccg gaggaggaag aaagtttata 180  
atattggacc tagccggttc ccagcccca cccctgtcat ctccactggc agagctcagc 240  
caattgcagt accggccatt catctggaag agctgaagga aattacaaaa aacttcagca 300  
gtgatgccct cattggcgag ggctcgatg ccagagtcta ttttggtgtg ctgaaagatg 360  
ggacgaaatc tgcagtgaag aagcttgact ccagcaaaca gcctgatcaa gaattccttg 420  
tgc 423

<210> 403

<211> 407

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D8

<400> 403

gcgtagtcca ttacaacacc ctatagttag tcgtattaag ggctccgct cgtgtcgctt 60  
ctcttctctc tcttctctct cctctctcca acaccccatc catcagcgct gcactccgca 120  
ttgctcttga tcccatccag tacatcgatt cgccccccag gatcaaaggc cggaagaaga 180  
atcaagttta taattttgga tctagccggt tcctacctga atgcgatgtc atctccaatc 240  
gcagaacatc atcaagttga gttctcagcc aatcatccgg aagggtgag cgacattaca 300  
gcccccttca ttagtgatgc cctcaatggc gacggctcat atgccagagt ctattttggt 360  
gtgctgagac atgggacgaa atctgcagtg aagaagcttg actccag 407

<210> 404

<211> 235

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D9

<400> 404

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taggcctgtc agggagattg cgcattgatt caagacggat ctgcgcttcc atagccatgc 120  
cgtgcttgct ctgcaggatg caccagtggc ctagctgggt ggtctcttcc aaaataccaa 180  
tctgtgcgag atccatgcca agcgcgtgac catgatgcca atggacgttc agctg 235

<210> 405

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-E11

<400> 405

gtctagaatt cacgggtcga cccacgcgtc cgtcaagaac ctctctgctt cctccattga 60  
ccaacaatta agcctccccg accgccacat ctattaggtg cagccatggg tgctgtgca 120  
acgaagccta agacgcttga ggggaaagcc ccagctgagg ccaccatctc cacacccaag 180  
gttgacactg agaccactac catccacatt gaggttgctg caaaacatgc agtagttgag 240

aaggtggagg aggacaagga ggaggcacta acagtggcgg cgaaacaaga gccagcagcc 300  
accattgagc ctcagcagat tgctagttag gtgaccactt cggaagtggc ggtcgtcgtt 360  
gtcgagcctg agaacaaaga ggaggaggaa gttgtggaga agaccgtcat cgag 414

<210> 406

<211> 340

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-G12

<400> 406

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ccatggtaaa aagggtgtca aaggagccca gccagggccca gtcctgtcat ggatgcagcg 180  
agctaggatt gccgtatgtg ctgctcgggg tctcgagttc ctccacgaga aggccgatcc 240  
tcgagtggtc caccgcgaca tcaagtcaag caacatactg ctctttgacc atgatgttgc 300  
gaagatcggg gacttcgaca tctcaaacca ggccctgac 340

<210> 407

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-G2

<400> 407

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tcgccgccgt gcccgccacc gccgcggcga cgccgaccga cgccgccatc gacgaggcgt 120  
acgcgcacat cgtcaacctc accgctaacc aggagtactg ggcgagagcg gcggaggcgg 180  
cgcacgcgta caaccgcgcg gcgtaccaga ccgaccccggt ggccgtcgtg cagcgcttca 240  
acgacggcgt gcacagggcg acggcgacgc ggtcgcggtc cctggcgcac agggcgcggg 300  
gcccctgcac ggcgaccaac cccatcgacc agtgctggcg gtgccgccgc gactgggccc 360  
gcgaccgcaa gcgcctggcc aggtgcgcca tgggcttcgg ccacaggacc accggcgggc 420  
tgggcg 426



<210> 408  
 <211> 437  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-G5

<400> 408

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 gcgggccgggc tcgggctcgt cctcgtcggc cgcaaccgg agaagctggc cgccgtggcc 180  
 gccgagatca gggccaagca cccaagggtc cccgaggtgc gcaccttcgt gctcgaacttc 240  
 gccagcgatg ggctcgcggc cggcgctcgag gcgctcaagg actccatccg gggcctcgac 300  
 gtcggcgtgc tcgtcaacaa cgccgggctg tcctaccgt acgcgcgcta cttccacgag 360  
 gtggacgagg agctgatgcg cagcctcatc cgggtcaacg tcgagggcgt cacgcgggtc 420  
 acgcacgccg tgctgcc 437

<210> 409  
 <211> 436  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-G6

<400> 409

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 gaacctgatc ccgtggagac gcagaacgat gatgccgcca aggactggaa gctcgatcat 180  
 cacgagaagg ctgcgaagct gagagacaat aagtcggcca tcaggaggat atggcagttc 240  
 ggcaaataaa actcgtccgg tgcttccgcc tccgcgacgg cgccggagga cgcgaggtt 300  
 cttcagtttc cgaagtcgcc aaggtcggac aacgagtacc atgtcgtcca ggacctcacc 360  
 gaggaggtgc cgttcatgga gacgagaggc gaggaagaag aagaagaaga cggcgagcgc 420  
 atgaaccctg gggatg 436

<210> 410  
 <211> 82  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-G7

<400> 410

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 gactccagag tgtgtgagga ca 82

<210> 411  
 <211> 458  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-G8

<400> 411

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 gtttgcggtg gtgggcacca agtcgccgct ggggtccgcc atcatctctc cgcccaacca 180  
 ggaggactcg gtgaccgacc aactgaagaa cgggtgtgcgg ggcctgatgc tggatgccta 240  
 tgacttcaac gacgccgtgt gggtctgcca ctcttccac ggccgttgcc tgaccttcac 300  
 cgcctacgtg ccggcgctga gcgtgcttac ggaggtccgg gtgttcctgg acgccaaccc 360  
 gtccgaggtg gtcaccatct tcctcgagga ctatgcagcg ccggggtcac tcagcaaacac 420  
 tttcaacgcc gccggactgt ccaagtactg gttccccg 458

<210> 412  
 <211> 435  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-G9

<400> 412

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 tctattagcg acagggccgc agggggccgt cagcgccgag gggatggtgt catttgacaa 180

tttgatcagc tgcaaggtac tgggcaactg cgataagaac ctgggccccg aggcctcccc 240  
cccagggaaa cccgccaacg actacacccg cggctgcaac ccgatcaccg gctgtcgcg 300  
ctgatcatat ctctctggtc gatgtgcgcg caatgtcaat gtcgcacgcg cgtgcaggta 360  
ccaggcctta gcgtgtggtg cggcgtgtgt gtatatatta cacacatgca ttatacattg 420  
gtcgtccatc gttac 435

<210> 413  
<211> 426  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-061-Q1-E1-H1

<400> 413  
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ggacatgata gacaacatcg acggccgctg ggtaaccaag aacaaggcgc gcatccaagt 120  
tggcgactcc tcttcgtcgg acgaaagcga cagggagaag gaggaagatg aagaagaagc 180  
acatgaggaa gtggccaagg cgcctccgct gggttggaat catcacaatc accacgaagc 240  
ggccggcggc attggcagca acagcaacag gaggcggctt ctgtcgaagc agctgtccat 300  
gaagaagacc accagggaga tcaaattgga gaagcgccg cggcagataa tgccggcgag 360  
cagcctggtg gtgtcgtaa acgacgacgg aggaaganga ngctgcggca gcatgaagag 420  
cgccgc 426

<210> 414  
<211> 433  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H11

<400> 414  
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gccccagctg aggcgcgctg ctccacaccc aaggttgctg ccgaggccac tccaatctcc 180

gttgagggttg cggctgatga acaggtagct gagaagggtg tggaggagga gccggctgcg 240  
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 gagcccgacc acaaggagga ggaagccgtg gagaagaccg tcgtcgagga ggagaagcca 360  
 gcggcagcag cccatgcaga ggaaaaggtc gccaccgccg ccgagaccac gacgacggtg 420  
 gaggcgaaga aga 433

<210> 415  
 <211> 385  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H12

<400> 415

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 ctcagctcct ccccgacat caccttcacc gagtcgcagg tcacattggt ggagatgctc 180  
 ttagctttag cttgtctgcc tcgcgcgggc aaacatgtca gaaactgcgg tacgcatcag 240  
 tcggacaccg cgatcgcggg ggccatgcat gctgtcagct cttgaccctt gtcaccatcc 300  
 aatccaatgg cgatcggtcg atcgtcttgt cacgattcac aaccgttgcc tgatgacgcg 360  
 cgcgcgataa catgccgtgc gtgcg 385

<210> 416  
 <211> 396  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H2

<400> 416

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 aacgcatcgg ggccgtaccg gtgcctgtag ccggaccacg cgtgcgatgc accgtggtgc 180  
 gacgggccgc tcggcacgct ggcgagcaac ggggtgggtgt agtcagcgca gtgtctcttc 240  
 aagctcttta cggccgatgc gtccctggcg tgccctgacg ggaagtggct cttcttctcg 300

ggcgactcta accacgtcga ctgcatccgg aaactcctca ccttcgtcct cggcatcacg 360  
gacacgtctg ctgtgacacg ccggtttgat gcagtg 396

<210> 417  
<211> 450  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H3

<400> 417

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aaaaaaacac actgaaccca ataatccgat cccacagaaa cttttctctc ggtccgttcg 120  
atcgatcgct gccgtgtcgt ttgccagaca ccatcagcac ccaaaaccat ggccctgcaac 180  
ctggctcagt gcgccaccgc cgccgcggcg accgtcgcgc cccgcacccc tcgccctgct 240  
gcgtccgcgt ccgtctcctt ctccgcgagg aagccggcgg gcggcagcct gcggctgcag 300  
cggcaggcgt gctgcgagcc gtcgggtggcg ccgtcgcggg cgggtgttcgc ctgccggggc 360  
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gtgttctca tgatgccgct ggacaccgtc 450

<210> 418  
<211> 369  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H5

<400> 418

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catcgcgga tacatatgga tcggtggatc tggcatggat ctcaggagca aagcaaggac 180  
cctctccggc ccggtgaccg atcccagcaa gctgcccagg tggaactacg acggctccag 240  
cacgggccag gccccggcg aggacagcga ggtcatcctg taccgcagg ccattctcaa 300  
ggaccattc aggaggggca acaacatcct tgtgatgtgc gattggtaca cccagccgg 360  
cgagccaat 369

<210> 419  
 <211> 415  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H7

<400> 419

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tttaccggcg acgagcacac accagggcac tggagggcta ccatctgctt cgctttctga 120
aaaaaaaaca gtttcggcat aattatcacc ctaagatgcc tggaattaca atggatggat 180
ttgttgacga ggagggtccg aacagggtga attcctctcc acagaatgaa aatctgcccc 240
cccaaattc gacggcagct tcaacaatgg cgccaagcat gcaaagtga gcaactgaga 300
tgcattgcga gagctccggt actggggagc cctcaattga gcagctctac aacaatgtgt 360
gcgagatgaa gagctcaagt gaggggtggc cctgtcaca tgagagcttt ggctc 415
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<210> 420  
 <211> 408  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H9

<400> 420

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ccacatcagc catggggcgc tgcgcaacca agcccaagac gcttgagggg caggccccag 120
ctgaggccgc cgtctccaca cccaagggtg cgcccgaggc cactccaatc tccgttgagg 180
ttgcggctga tgaacaggta gctgagaagg tgggtggtgga ggagccggct gcggcggccg 240
acgttgagca tcagaaggct aatgagggtg tcgctccaga ggcgccgctc gccgagcccc 300
accacaagga ggaggaagcc gtggagaaga ccgtcgtcga ggaggagaag ccagcggcag 360
cagcccatgc agaggaaaag gtcgccaccg ccgccgagac cacgacga 408
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<210> 421  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A10

<400> 421

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tgccgaggat atccagcccc tegtctgcga caacggaact ggcatgggtca aggctggggt 180  
cgctggcgac gacgccccga gggccgtctt cccagcatc gtggggcgcc cgcgccacac 240  
tggtgtcatg gtcgggatgg ggcagaagga cgcctacgtc ggtgacgagg cgcagtccaa 300  
gaggggtatc ctgaccctca agtaccctcat cgagcacggg atcgtcagca actgggacga 360  
catggagaag atctggcatc acaccttcta caacgagctc cgcgtggctc ccgaggagca 420  
cccg 424

<210> 422

<211> 443

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A11

<400> 422

ccacgcgtcc gaccacgcgt ccggacggaa ctaccgggtga gaaatcaggc gacgacaaag 60  
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cttctggctg ttgtacctga tgctcagagt agacgctggc tgctgctccg caaggaaact 180  
gactcccccg accgcggttc atgctcctgg ctggtctggct cgctggccgc ctcgacggga 240  
acgctgccgt agaatgacga ctggggctgg tggtgtgtgt acagtatggt ccttttttct 300  
ttcttctttc ccttttcata cattaagctc tgtgatgtag ctgccctggg tggtgattca 360  
tgaaatcatg ctagagattt tttcctggca gtaagtgcgt gcctgtaaaa ctgtcgaact 420  
atttgacga aagttgtaca ctg 443

<210> 423

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A12

<400> 423

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cccctccaag cccatgtccg tgtacgccac cgtgtgggac gcctccacct gggccaccgc 180  
cgggggcccg taccgcgtca actaccgcta cgggcccttc gtgcctcctt tcaccgacct 240  
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cgcagccgcc gaggcactca gggcgctcga cgtggccgtc atgacgggtg agaagcagca 360  
agccatgcgc aggttccggg agcgcaacat ggtctactcc tactgctacg acacgtgcgc 420  
ctaccccgcc gcgttcc 437

<210> 424

<211> 183

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A7

<400> 424

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catgtaacca gaatcatcaa tcagcctgta aaaagagaat atgtgaaaat tgtattaagc 180  
tga 183

<210> 425

<211> 394

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A9

<400> 425

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ggccacgagg gtgacgcatg tgcgcaaaga acgggtttcc ccgagttcaa gagtgaggag 120  
atggcgaaca tcatgaacga cttcgacgac ccacaggacc tcgcaccaac aggcctgttc 180  
ctcgggctga cgaagtacat ggtcatccaa ggagaacctg gtgctgtcat ccatggcaac 240



aagggatcag gaggcacac cgtgaacaat ataggatcatg cactcgtggg tggcatcgac 300  
gatcagccga tgacgcctgc gcaatgcaac atgggtgcttg caacgctagg cgactatgtg 360  
cttgaacaag gcatgtgact actacgtagc agct 394

<210> 426  
<211> 396  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B10

<400> 426

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gggtggcatg cagatttttg tgaagacatt gactggcaag actatcacct tggaggtgga 180  
gagctctgac accattgaca atgtgaaggc caagatccag gacaaggagg gcattccccc 240  
agaccagcag cgtctgatct ttgcgggcaa gcagctggag gatggccgca ctctcgcgga 300  
ctacaacatc cagaaggaga gcacccttca ccttgttctc cgctcaggg gtggtatgca 360  
gatctttgtg aagaccctga ctggaaaaac cataac 396

<210> 427  
<211> 424  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B11

<400> 427

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cacgacaacc acggcaagtt cacggccggg ccgtggaaac ctgcccacgc gaccttctac 180  
ggcgggccccg acgggtccgg caccacggcg ggcgcgtgcg ggtacaagga cacgcgcgag 240  
caggggtacg gcgtgcagac ggtggctgtg agcacggtgt tgtttggcga tggcgcggcc 300  
tgcggcgggt gctacgaggt gcggtgcgtg gacagcccca gcgggtgcaa gcccacgcg 360  
gcggcgctgg tggtagcggc gaacgacctg tgcccgccca aggacaagtg gtgcaagccg 420

ccgc

424

<210> 428  
<211> 442  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-063-Q1-E1-B12  
  
<400> 428

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gcccgtggcc accgcgtacg gctgctacga cgactgctac gagcgctgcg ccaacggcaa 180  
gaaagacccc gcctgcacca agatgtgcaa ccaggcggtgc ggctccacgg atcagggcgc 240  
cggtgccgcc ggcgcgcgcg cggttgatc gccagcgca ttcacgctt cagctcgata 300  
taatcgctgc tccgtcagca acccacatat gattcgatca attttctctc tctaatttct 360  
cgaccccgtc gaattttttt cttttctatt cttctactat actactacta tctgtttgtc 420  
gcgttgaatt cttctcatac at 442

<210> 429  
<211> 366  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-063-Q1-E1-B9  
  
<400> 429

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caatacttta agccgaccta tgctagctat actagattgg gttggatccc aagcaatgca 180  
ttacacatgc atgcattgga ccgtgatatc tatttgctac cactacccta ttacgacagt 240  
gatgctggcg ccaacaatga tggtgtcatc ctcttctctc atcttcttca tctccatata 300  
tagctagagt gagacttcgc tggtgtttta aagagaagag ttaagaaatg gattgacacg 360  
ttatat 366

<210> 430

<211> 428  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-063-Q1-E1-C10  
  
 <400> 430  
  
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 aacctggtgg agatgtaccg caagatcagc agagccgacg tcaagtaccc gcagtgggtc 180  
 tcccctgagc tccggcggtt gatgcccaag ctctctgaac cgaacccaaa caacaggatc 240  
 acgatcgaga agctgggtcg gcacccctgg ttcaagaagg ggtacaggcc ggccgtcatg 300  
 ctgggacagc cgcacggctc cagcagcctc aaggatgtca aggtcgcctt cagcaacgcc 360  
 gaccacaagg acagcagcac caaggtggaa cagccggcgg acagctcctt gaagccgggg 420  
 agcctgaa 428

<210> 431  
 <211> 345  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-063-Q1-E1-C11  
  
 <400> 431  
  
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 tgcaccgcag gtgacatgtc gaccatgggtg tcaggtatct tgatctcaat gtccatcctc 120  
 tttagaata gtgaacaggt aatgaatgg gcgttaccta gattagacga ttacaggac 180  
 atacaccttg ctgcagctgc cgtactagga attcagcacg gtgcaatcgg ccatcgaaac 240  
 agtggccgac ggtaaactgc aatgggtaag cgtccagtac cggctctagta tgcacagggg 300  
 ctgtgttgtg aaaccggaga gtagacgctt catcttcgag agggg 345

<210> 432  
 <211> 420  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-063-Q1-E1-C12

<400> 432

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aaagcggtccg ggcttgggtg gtccttcgac atcaccaagt tgggcgcctc cggcaatggc 180  
aagacagaca gcacgaaggc tgtgcaggag gcatgggcat cggcgtgcgg cggcactggg 240  
aagcagacaa tctcatacc caagggtgac ttccttgctg gacaactcaa cttcacaggc 300  
ccttgcaagg ggcacgtgac catccagggt gatggcaatc tgctggcgac cacggaccta 360  
agccagtaca aggaccatgg taattggatc gagattctac gtgtggataa cctggtcac 420

<210> 433

<211> 208

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-C3

<400> 433

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gatcgctatt gacgagccga tggcacatgt gactatgcag gacggccctc agtagcagga 120  
gacgcaacgg atcttcttca cagatttcct accagggtctc acgcccacgc aaaaactgct 180  
gtacagcgac tgacacgacc ttgggtac 208

<210> 434

<211> 564

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-C7

<400> 434

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tccgccgttt gcccgtcgat cagttgttgg ctgccggccg ggtactaccg cctgcacgag 120  
cagcggctag ccacagccca cagacagacg acgtcaggtc ttggcagggtg tgcaagcaga 180  
cagagctcgc tcggtcgcca tgtctttcac cggcacgcag gacaagtga aagcctgcga 240  
caagacggtc cacttcatcg acctgctcac cgccgacggc atctcgtacc acaagacctg 300

cttcaaatgc agccactgca agggcgctct ctcgattagc agctactctt ccatggacgg 360  
 cgttctgtac tgcaagacgc acttcgaaca gctcttcaag gagacagga acttctccaa 420  
 gaaattccaa ggtggaggtg gagcatcttc aaacaagaac gacccggcaa aggctccgag 480  
 caagctgtca tctgcattct ctggaactca agacaaatgc gcagcctgcc agaagaccgt 540  
 gtatccattg gagaagatga cgct 564

<210> 435  
 <211> 441  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-C9

<400> 435

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 aggcgctcgt cggcgcttcc gagactgtca tagacacca gaaggacgcc gccgccggca 180  
 ggccacaaca catctaccgc aagtcagctt aaaacatact gggggggcgg ggacgcatcg 240  
 atctccacg ctctgtgtct tcgccttaat taattaatta attggttatga tcatgtcggc 300  
 cagcccaacg ccgtatgcat gcatgcacac ggcgctaatt aatccctggt tatttactac 360  
 tccgtgaaat gtagtttctc cgtatacacg gagcagtagt attctgtaaa gaggaaaatg 420  
 gtggaaccg atgttgcatt c 441

<210> 436  
 <211> 380  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D10

<400> 436

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 ggactacgag gaggtcgggtg ctgagtttga cgagggtgag gacggcgacg agggtgacga 180  
 gtactagacg ctctactggc gcggcttctt cggccttggt tgccactgct accctgtgat 240

ctgccctgat tggctccaat cgtgtaatgt tccggtcggt tcttatcaac ctgtcgttgt 300  
 gtgggtaaca ccttacgttg taagacttta ttcccccgct ttgcaactgg gtaattaatt 360  
 ttggcgtaat ggttttcttg 380

<210> 437  
 <211> 425  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-063-Q1-E1-D11  
 <400> 437

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 gcggtggctc caaggaggcc gtggccaccg gcaacaccag cgccggcagc aaggctcctc 180  
 ggaggaagcc ctctctcgtc tccaccggcg caagccacac atccaccacg tcgccgtcgt 240  
 cctccggcgt cgtcgtcaag gacgtcgtga aggatgcggc ggccggccggc gaggtgatga 300  
 cgcccgccga cgccgagaag cctatctctg tcgaccccaa ggcagacgcc atcgtgggtga 360  
 tggacgcaa gaaagaggag ggcaacaaca aggtggccgt ggaggaggat ctgcttcctg 420  
 aatcc 425

<210> 438  
 <211> 399  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-063-Q1-E1-D12  
 <400> 438

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 cttggtcaga gtaaaaaggc agatgacatg agcagagttg ctgggttaga taaccaaggg 120  
 attgttgtcc ttccagaggca aattatgaaa gagcaagatg agggctcttg gaaactggaa 180  
 gagacagtgc tgagcacaaa gcatattgca ttagcagtca atgaagaact taccctgcac 240  
 acaagattga tagatgacct tgaagatcat gttgatgtta caaattcacg tcttcagcgc 300  
 gtgcaaaaga ggcttgcaat tctgagcaag cgcaccaaag gtggctgctc atgtatgtgc 360

ctgcttctat ctgttgctgc catcgtgatt cttgcagtc 399

<210> 439  
<211> 261  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-063-Q1-E1-D2  
  
<400> 439

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tgcctaagtt tcgtggtgtc tactactatg tctactttat gttgtcctaa tggttgtaag 180  
tatttttggga gtcactttgc ttgcgaatgt ctgcgtaag acttatgtgg tcaatggtcg 240  
gttattaact tattaccatg a 261

<210> 440  
<211> 412  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-063-Q1-E1-D9  
  
<400> 440

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ccggcggggg cggcctggcg gccctgaggg cggcgcgcgc cgtgaaggag acgacgggga 120  
tcgtgggcct tgaggtggtg cctaacgcgc gagaggttct ggtagggctc tacgagcgca 180  
cgctcaaaga gatcaaggcc gtccccgaag acgaggggta ccgcaaggcc gttgaatcct 240  
tcaccggtca ccgcctccag atctgccagg aggaggagga ctggaagcgc atcgaggacc 300  
gaatcggatg cgggcaggtc gaggagctca tcgaggaggc cgaggacgag ctcaagctca 360  
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<210> 441  
<211> 382  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-063-Q1-E1-E10

<400> 441

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cccgtgcagt acttgcgtctt ggatgccatc ttggacgtgt tctgcagtac ggcgatcggc 180  
aagcatgacc acttctcaaa tcccgggtggc ccaggctgca tgcacctcct tctcggacag 240  
acacttacct gcatgacagg gtacctcttg ccatcaccgg agttcttgat gaccttgaag 300  
ctctgaccgt aatatatccg gaatatggtg gcgtcctcca ccctggacac gggccggggc 360  
atcacaggcc cgggcccggc ct 382

<210> 442

<211> 390

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-E11

<400> 442

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cgcgacggcg cccccgcgc ggcccggcac cgcgtccaac ccgctcggcg ccttgctcgt 180  
ccccttctgg cgcggggtgc ggcgagcgcc gaaacagccg gtccaccccg cctccgccgc 240  
cgcgggcgcg agggcgggcg agcagcagga ggcggaggcc gaggcggagg cgcggcagct 300  
gggtgggggtgc gcggtgccgc tgttcgggcc gtacgtggca cagctgccgt ggcacggcg 360  
cgcccgggcy tggctgtcga agctgttccc 390

<210> 443

<211> 483

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-063-Q1-E1-E12

<400> 443

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gtcaccgtag cagaaggtaa taatagtaca taatacaaac atgataacat ggaatgcaaa 180  
aggtacagga tttctacaac taagccatct gtttctaaca tgagtagaag aaatgacagg 240  
acaggtaaac aaacctctgc agagactgca actgcatcaa accagtggtc acatttcaag 300  
gcctgcagaa gtggccgtag acgggtatca aaattggaga cactgcagt tttaacacca 360  
gctttcctca nagctttgaa tacattttca gcatcagggt cacaagctt cgaggcctan 420  
cangcataat aatcttctcg ttagtcgagt tgaagtcaga gacaacgaaa gaatgttgtt 480  
ttg 483

<210> 444  
<211> 409  
<212> DNA  
<213> Zea mays  
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<400> 444

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atgcctgtat gaactcaaga tttatggtag atcctggaac tgtgggatgc caaacctggg 120  
ctaactacca cattatgaac tctctgctga tctaacagca tttctacaaa aattcttttg 180  
ccggaagggtt cattattcat gtgtaacaat gaacgaacat ctactgctta agattgggtga 240  
cctacgcatt cttgacccga actaggatcat tgggacagtc atgaagtact caactgggga 300  
aaccattgca catccaatct ccatggcgca atccatttta acagtgggac aaaggatggc 360  
ttctgatgcy gcacctcatc tgcaacttgt ggagtgtcac atttgtcag 409

<210> 445  
<211> 342  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-063-Q1-E1-F10  
<400> 445

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gctggcggtg ccgccgcgac tgggcccgcg accgcaagcg cctggccagg tgcgccatgg 180  
gcttcggcca caagaccacc ggccggctgg cccggaagtt ccacgttggg gatggcccca 240  
accaagaagc cggcgaaactc ctcaaccca agaaggga gctccggga gccgttacct 300  
cggccccgac cctgtggatt aacttcgcgc gcgaaatggg ga 342

<210> 446  
<211> 456  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-F9

<400> 446

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ccttcaccac catcacctcc accgatgatt aaatcacgcg caccaccggt gccggtgagg 120  
tcacctccat cgtcagtga atcacacct ccttcaccac tgttaagtgc gccgccgcca 180  
ccagcgccgg tgaggtcacc tccaccgcta acgaaatcat cacctcctcc accaccgata 240  
aggctcgccac cccaccaca agcaaaactca cctcctccat cagctctaata agctcacct 300  
cctcctccga tgcaatcccc tccaccgcct gctccagtca gtcaccacc accacctata 360  
agatcaccac caccggctcc agtatgctca ccacctctc tggcgcaatc cctccatca 420  
cctgctccag tcagctcact accacacctg taaaat 456

<210> 447  
<211> 299  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-G10

<400> 447

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aaaaaaaaa ataaaaaaga acaaagcaaa aaaaaaaatc cagaggcaag attctctagg 120  
aaggtcagcg acaaaggggc gtgccctcta aagtttgagg gtttcaattc cctggcctcc 180  
aacttcttcc gtctcctacg gtgtcccca agtccattcc aagggcctcc cttttaaac 240  
ttttggatgg gtaaaccttg gcctttcccc actttaacc ctttgccgta cccctctt 299

<210> 448  
 <211> 420  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-G11

<400> 448

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cggggccctc ctgcaaacgg tgccggtcgg gtagcagggg gtgtttctcat cacggtaagc 120
gccgccggca gaatcggcgg tccgaatctc caggaaccgg cgattccacc tcaacgactc 180
ccacatctgt gcgaagatgg cgtacactcc tttggatacc ctcaaattggg ttgtaaagga 240
aatggagatg aactcggtcg aggttaggca gacggttggt catcctacca actcatctta 300
tgaactccag cagcttattg acaagatcct agacttatcg gattggttgg acatggttgc 360
cattcaatgt gcataagtta ttaccaatta caaccacccc cctcacccac tacagaagag 420
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<210> 449  
 <211> 408  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-G12

<400> 449

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cggcccaacc tgaatggtcc tccaccaaga aggaaaaagg gagggaggga acggaagcat 120
caaccatgtc caactccgcg tccggaatgg ccgtccgtga tgaatgcaag ctcaagttcc 180
aagagctcaa ggcaaagagg agcttccgcc tcatcgtggt caagatcaac gagaacgtgc 240
agcaagttgt ggtggacaag ctgggggggc caagaaaaaa ctacgacgcc ttcacggcct 300
gcttccccgc caacgagtgc cgctacgccg tgtccgattt tgacttcgtc actgacgaga 360
actgccagaa gagcaagatc ttctttatct cttgggcccc ggatacat 408
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<210> 450  
 <211> 357  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-063-Q1-E1-H10

<400> 450

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gaaggagaaa tggcttccgc acacaacgct ctccgggtgt ttttcatoct agccgtggta 120  
tgtgccgtat gcacagcgaa aaggacagga gccacaagg agaatacggc ggcagcccc 180  
ggtaggcgtg ctggaggcag cggcgggacg ttcgacatct ccaagctcgg cgcgaccagc 240  
gacggcaaga cggactgcac aaaggcagtc caggacgcgt ggacgtcagc gtgcgaagcg 300  
accggaagcg ccacgggtgt gattcccaag ggcgactnac tgntcggccc tctcaac 357

<210> 451  
<211> 401  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-H11

<400> 451

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tgaaatctcc ttcaccacca tcacctccac cgatgattaa atcaccgcca ccaccggtgc 120  
cggtaggtgc acctccatcg tcagtgaat caccgcctcc ttcaccaactg ttaagtctgc 180  
cgccgccacc agcgcctcgt aggtcacctc caccgctaac gaaattatca cctcctccac 240  
caccgataag gtcgccaccc ccaccacaag caaactcacc tcttccatca gctccaataa 300  
gtcacctcc tcttcgatg caatccctc caccgcctgc tccagtcagc tcaccaccac 360  
cacctataaa atcaccaaca ccggctccag taagctcaac a 401

<210> 452  
<211> 418  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-H12

<400> 452

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gccgcaaccg ccacatcagc catgggcgcc tgcgcaacca agcccaagac gcttgagggg 120

caggccccag ctgaggccgc cgtctccaca cccaaggttg cgcccagaggc cactccaatc 180  
tccgttgagg ttgcggtga tgaacaggta gctgagaagg tgggtggtgga ggagccggct 240  
gcgggcgccg acgttgagca tcagaaggct aatgaggtgc tcgctccaga ggcggccgtc 300  
gccgagcccg accacaagga ggaggaagcc gtggagaaga ccgtcgtcga ggaggagaag 360  
ccagcggcag cagcccatgc agaggaaaag gtcgccaccg ccgccgagac caccacga 418

<210> 453  
<211> 436  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-H9

<400> 453

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gacaggtaca tgcgtagccg cctgcaggcg gcagcggagg cggccggcaa gcctgattgg 120  
ggccacggtg ggccgaccga ctctggcggc tacaacaact ggccggagga caccgtcttc 180  
ttcgcggcgc acaacggtgg gtggagcacc gtgtacggcg acttcttctt gtcgtggtac 240  
tcgcagatgc tgctggagca cggcgacctc atcctgtcgg gcgccacgtc cgtgttcggc 300  
gccgcgccc tggaggtctc cgtgaagggt gccggcatcc actggcacta cggcagccgg 360  
tcgcacgccc cggagctcac cgcgggctac tacaacacgc ggtgccacga cgggtatctc 420  
aacatcccgc gcctcc 436

<210> 454  
<211> 458  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-A10

<400> 454

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aagtcaaca agaagaaaga gaaaactcgg aagaagcaaa gttgtaagtc tagcggtgaa 120  
aagaacaaga ataagacaag ttcggaagga aaatatattg aacaaccaga ctcttgctac 180  
gaaagcaaag atgaagacag ttggagtggg aacagtagta gttcattatc gaagagacca 240

actcagcatg cttttggcgc aacgagtcga ttttcaaagg atacagtaca ctttgttcaa 300  
gatgaatcta gtcgttactc caatggacct atcatggata aagatttaga agagtgggaa 360  
gcagatattg aggcggaagt ggaagctttc cgtaagagac tcgaggaact tagtgcgcca 420  
ttgaagaata agccaaaggt cgggtgccttt ccgcatcg 458

<210> 455

<211> 454

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-A11

<400> 455

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ggttgctcaa ggtgtgaaat ggcagtagtt gaagataaca gagtctttgt tgggtgggtcat 120  
ccttggtcag ttagtgaaga agaccttcgt gaaacttttt ccaaatatgg agaagttggt 180  
gatgcaaggg tgaatatccg tgttcctttt gttttgggtt aaacttggat cccttgacta 240  
cctgcaccta ttctcgggtt cccttttatt tgcccatag ttagtgtcac taactagtcg 300  
catgttactt tgagagggta gagagctttt cgagttactt tataactgtt cacacttggg 360  
aaccctcgaa aatagtgtga atgatatgca cttgggttga ctagtgtaca ccaaagttgt 420  
tgttactata tagtgctcac aactgtgtcg ttgc 454

<210> 456

<211> 203

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-A8

<400> 456

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gcgtcatttg tatggcttta atttttttta ttatatatag ataaggaaat attttcccta 120  
aaaatggagt acaagggatt gttgagaact gcttttggtc atgatattaa tatatatgat 180  
gaatatttct tgcaatttcc ttt 203

<210> 457  
 <211> 506  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-B10

<400> 457

gggccggtat tccgggtcga ccacgcgtcc ggtaaacctc ctcttgcaatt gcattgcagg 60  
 tcgtagttga gcagcagcaa ccactgcaca ggatgtcgtg gcagacgtac gtcgatgagc 120  
 acctcatgtg cgagatcgag ggccaccacc tgagctctgc cgccatagtc ggccacgacg 180  
 gcgccgtttg ggcccagagc accgcattcc cacagttcaa gccagaggag atgaccaaca 240  
 tcattaagga ctctgacgag cctgggtttc tggccccgat cggcctcttc cttggcccca 300  
 ccaagtacat ggatcatcaa ggcgagcccg gcgctgtcat ccgcgggaag aagggatctg 360  
 gaggcataac tgtgaagaag accggacagg cgctggtgat cggcatctac gacgagccca 420  
 tgacccttgg acagtgaac atggtggttg agaggctcgg tgactacctc gtaaagcaag 480  
 gcctgtgaat gcatccaaac aacgac 506

<210> 458  
 <211> 343  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-B3

<400> 458

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 ctgacgttcc gggatgatgac cagcgaccac cgcaaggcca cctcatggca cgttctccct 120  
 gctgactgga agttcggcgt cacgtaccag gcgtccaaga acttctaagt agccactttc 180  
 cctcctcttc ttcaacctgc atgcccgcaa gcagccatgc agatgataac atgcatcatg 240  
 catgcatatt cattctttcg ctcatgcact ccgatacggg gccggagtta aaaaaatata 300  
 aatcaatgtg caaattcaaa tgacatctta accagttgtg atc 343

<210> 459  
 <211> 293  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-B6

<400> 459

cctgacgtac ggtccggatt cggggtcgac cacgcgtccg tctagatcgc gagcggcccc 60

cttttttttt ttttttgaaa aagaaaatat gaccgttttc aatttttacac ggtaatgtat 120

caccgaaaca agtatacaac attggccaac tggtaatttc cttaccatgt accaacgtat 180

ctcctctcac ccacacacat ctacacaatg aggggggcaca gccaaacctt gcctctcagg 240

ggccgaagac acctcgtctgc aaagaaggaa tccccagggg gaacgcatga cac 293

<210> 460

<211> 498

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-B7

<400> 460

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ggtcattgca attctggaca tagccaagtg cctatatgat gctattgcac ggatggaaag 120

ggcggcggag aaaggaaaag caattgccgc tgccgtcgag ggcgttgaaa agcattgggg 180

agcagctgtg cctgggtcta acaattttat tgagacgctt cgagaacgga tgtttaggcc 240

atcgtgtctt actattatct ctgagaatcc aaaagttgtc actgttgcac catcagacat 300

ggtgttgaca gcatcaaaga agatgctgga attaaaagtg agttcagcag ttgtagcaat 360

tgaaaacaaa cctggaggaa ttctgacatc tagagatata ttgatgcgtg ttatcgccca 420

aaatcttcct cctgagtcca ccacggtcga gaaggctcatg actcagagtc ctgaatgtgc 480

cacagtggac accccaat 498

<210> 461

<211> 345

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-B8

<400> 461



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tccaggactt tgactcgtgt gaccgtccct tcacccatgc cggcggtgtc cccaacccca 120  
tgggtaagtt cgataaggag ctccagccaga tggccaacaa ctgcatggcg cttgcaaaca 180  
tgatatgaat catatatatg cggccgggga cagtttggca tgtgcttaca ctctgcgct 240  
agcgtgaggt ggcggcgccg cgcattgcaag ggaatgcttg gacatgagga gcacttggtt 300  
ttcatttaag aaatcanntg aatataatta caattaagtt gaacc 345

<210> 462  
<211> 496  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-B9

<400> 462

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gcggcgtggg aaatccgggg aagaagccag tggccgagag acaacagacc gcgtgaggca 120  
gcgacagtac gaggcacgcc acctagcctg cagagagggt catctgcaca ccaacagggt 180  
ttgcgacaat gtctagacct tcattctaac agatgcaacc ttaaagagtg ctgagattca 240  
agaaacactg agcaagatgg gtctcgatgc cgtgggtggc gcctgctacg tctttctagt 300  
acttgctctt gtgtcacag ttcgcttctt ctacgtactg tggcacagtg gccaaccaga 360  
gtcaaggttg tgcaccacca gattgcgttg tctcaatgtc cttgggtccg aaaaggtcca 420  
gattaccagc tccgggtgat gctgatgagc tatctgtcat tgaagaccaa attgcatgga 480  
ttgttcacat aattac 496

<210> 463  
<211> 502  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-C1

<400> 463

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ccttttcttg ccacggcaaa acaccttcgc cggcgagagc atggcgatgg cgtaccgtgt 120

cctggagggtc accctgggtgt cggcaaatga cctcaagaaa gtgtcgctct tctcccggac 180  
 tcgcatctac gccgtgggtt ccatctccgg attcgacctc cgcattccctt cccacagcac 240  
 ccaagcagac cacagcaacg gctgcaacct ctgctggaac gccgtggtac acttccccat 300  
 cccggctgcc gctgacacct ggggcctcgc actccacgtg aggctccgcg cccagcgtct 360  
 atacctgggc gatcgcgaca tcggcgaggt gtttgtgccc atcgacgacc tcctggccgg 420  
 cgccgacaag ggtggcgatc cgaggcccgt gagctaccag gtgcgagggc cgcactctgg 480  
 ccgcgcccac ggcgtcctct ac 502

<210> 464  
 <211> 419  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-C11

<400> 464

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 ccccggttcg agcgtgcta agcaagagag cacgcctgcg gcaacgagga ctaggctgta 120  
 cctctagagg aactacacag tgctggaacc ttcataatgg agcaagctcg cttacaagct 180  
 ataatgggag acttctcgt agacaatctc actacggcca gcactacgca cgtctgcact 240  
 cggtcatgg gcaccttcgg ttacctaaca ccggagtagc cctccagcgg caagctcacg 300  
 gacaagtcgg atgtcttctc cttcggcgtc atgtgtgtgg agctgtcac tgggcgccgt 360  
 cccatcgata ccattaactt cattgaggac agtctcttgg actgggcgcg cccgtgct 419

<210> 465  
 <211> 210  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-C2

<400> 465

ccgggtagac cacgcgtccg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaagaaa 60  
 aaaaaaaaaa aaggaaaaaa acaaaggag gccgccctaa aagttccaat ctaagctaca 120  
 cgtgcatcgc acgttcaata ctcttcaaaa gtgtctccaa acttcatttc agtgaccgtc 180

gttttataac atcgtgacgt gggaaatccc

210

<210> 466

<211> 489

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-C3

<400> 466

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atggtgtgag ccacaccgtc cccatctacg agggatacgc cctccccac gccatccttc 120

gccttgatct ggccggtcgc gacctcaccg actacctgat gaagatcctg actgagcgcg 180

gctactcctt caccaccacc gctgagcggg aaatcgtgag ggacatgaag gagaagctcg 240

cctacatcgc cctggactac gaccaggaga tggagaccgc caagaccagc tcttcctggtg 300

agaagagcta cgagctcccc gacggacagg tcatcaccat cggcgccgag cgcttcctgct 360

gccccgaggt cctcttcacg ccatacctca tcgggatgga agctgccggc atccacgaga 420

ccacctacaa ctccatcatg aagtgcgacg tggatattag gaaggacctg tacggcaaca 480

tcgtcctct 489

<210> 467

<211> 138

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-C6

<400> 467

ggtcgaccca cgcgtccgcg gacgcgtggg cgacggcgtc tccgtgatgg ggtccagcga 60

tatctggatc gaccacctgt ccatgagcag ctgcgcggac gggctggtgg acgcggtgga 120

gtgctccacc gcttgtct 138

<210> 468

<211> 500

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-C7

<400> 468

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gtggccttgc tgagcgtggc cctagtgggc ctgtcctct gccacctgc caccaccgcc 120  
tccgccacc agaaagacat ccacgtctc ggcagcgtcg acggctccag cgacggcagc 180  
agccccgagt ccgaaggccg cgtcgtctac gcggacatga agctggctga tacggaatcc 240  
gatgcgccgg cgccggcgcc ggcgccgggg ccgtcgtccg gttgaactga gaagcgtgcg 300  
tccagccaag caaggtggtc aaaaccgaga actaattaag ggctcgatcg tgtgtcaggc 360  
tactactgtt cttgccataa ttatatatag atacgcanag tgtggccaag cctaccaca 420  
tgcattgtat tgcattgctc cgaatatata ttatccgact cgatcctgcc aaattgtntc 480  
gtcgacntca tgatatatat 500

<210> 469

<211> 202

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-C8

<400> 469

ccacgcgtcc gcggaagcgt ggtgcgtgcc tagcatgcat gcatgtgacg acctctctc 60  
ctcgtgtct ctctgtatct gcaactgcaa gcaaggaaat taattaaaag aagatcggcg 120  
ccatggcggc aacgacgacg gggatgcaga tgatgcaggc gcagcaagcn gcggcggttg 180  
tgctgtgctt ggttgtgttt gc 202

<210> 470

<211> 356

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-D1

<400> 470

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ccggagatgg acgagaagga ggtggcgatg cggagattcc tgngcagccg ggtgaagaca 120  
 gcgatggagc cgcggtcaga gtcggagcag ccgcggcgcc gggaggtggc tcggagcaac 180  
 gacgtgatcg aggcggcacg caccaagctg atgcagaagc gccagtgcag caaggtcaag 240  
 gcgctcgtcg gcgccttcga gactgtcata gacaccaaga aggacgccgc cgccggcagg 300  
 caaaacacat ctacgcaaat taacttaaaa catactgcgg ccggcgggac gcatcg 356

<210> 471  
 <211> 466  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-D11

<400> 471

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 gacacagacg ggccgcttct gccgcgaagg tggacgatct aagcagcaga tccgcggggg 180  
 atctggtcat ggtgaacgaa agcaagggcg tctttgggct cacggacctc atgaaggcgg 240  
 cggccgaggt gatcgggagc ggtgggctcg ggtcggcata caaggcgggtg atggccaacg 300  
 gcgtggccgt cgtgggtcaag cgctcccgcg acatgaaccg ggcgaccaag gacgcgttcg 360  
 aatccgagat gaagcggctc ggcgccaatg cggatgccaa actgctgccg ccgctggcct 420  
 aacactaccg caaagacgag aagctcctgg tctacgagta catccc 466

<210> 472  
 <211> 404  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-D12

<400> 472

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 ggccaggccc tcgacatccc cgccgaggtg tgggacccca agagcggcgg cgtgatcctc 180  
 gactccggca cgaccctcac ggtcctcgcc accccggcgt acaaggccgt ggtcgccgcg 240

ctgaccaagc tcctggccgg ggtcccaaaa gtggacttcc ccccgttcga gcactgctac 300  
aactggacgg caccgcgacc gggagcgccg gagatcccaa agctggcggt gcagttcacc 360  
gggtgcgcgc ggctggagcc accggcgaag agctacgtga tcga 404

<210> 473

<211> 493

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-D3

<400> 473

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cgtgcaggac gcgtgcagca agacacaatt cccaagatc tgcgtggaca gcctcacgc 120  
aaagccagag agccagaagg cgaccccgcg ccggtggcg gagctgttcg tgaacatcg 180  
ggccgagaag ggatccggga tggccacgtt cgtgcacggg aagtacaaca acgccaagga 240  
cagcaccggtg ttcaagtgtc acgacagctg ctcgagcagc gtcgaggagg ccgtcgccca 300  
cctcaacggc ctcggtccggg agcccaccga cgccaagtcc ctggagctca agtcgtggct 360  
ctcctccacg ctcgggcgga cctccacctg cgaggacgcc tgcaaggacc tgccaagaa 420  
cggcgacaag gacgacgtcg tcaacttcag cctcgacttc gagaagctgc agcgcgtcac 480  
gctggacctc atc 493

<210> 474

<211> 483

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-D6

<400> 474

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cgttctgccca ttatctcttc agtatggctt tccaattgtc cagaaatttt tggagggagc 120  
ttccagcatt gacaaccact tctactcatc ttcatctgag aaaaatatac ctgtacttct 180  
tggtttgctg agtgtgtgga atgtttcatt tcttggttat ccagctaggg caatattgcc 240  
atattctcag gcacttgaga agttggcacc acatatacag cagcttagca tggagagtaa 300

cggaagggt gtttccattg atggcgccca actttccttt gagacagggtg aaattgattt 360  
 tgggtgaacct ggaactaatg gccagcacag cttctatcaa ttaatccatc aaggaagggt 420  
 tateccttgc gactttattg gtgttgtaa aagtcagcag cctgtttact tgaaaaggga 480  
 aac 483

<210> 475  
 <211> 448  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-D7

<400> 475

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 acccgctccg attccatcat caccgcctac cgcgaccact gtacctacct cgcccgcgga 120  
 ggggacctcg tctccgcctt ctccgagctg atgggccgcg agggcggtg ctcccgcggg 180  
 aagggcggat ccatgcattt ctataagaag gatgccattt tctacggcgg gcacggcatc 240  
 gtcggcgcg cagggtccct cggatgcggc ctgccttcg ctcagaagta caagaaggag 300  
 gagacggcca cgtttgccct ctatggtgac ggtgcggcta accagggaca gccctttagg 360  
 ctctcacat ttcggcctcc tggaagctgc ccgaaaatt ggtttgcaag aacaaccatt 420  
 atggtatggg aacaccggaa tggagggc 448

<210> 476  
 <211> 442  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-D8

<400> 476

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 gagaaccgac ttgccaccgg ctgctcgccg tctctctctc tccctcgggg cgcgcgcgcg 120  
 ggagacaggc caaccgatcg tcaggcggcc agccatgggc aagcacgggc acggcaagt 180  
 ccacgacgtg gaggcgtgct acccgccggg ggcagcgggc ggcggcaagt acccgtacat 240  
 gacggagaac ccgcagctgc ggtgggcctt catccgcaag gtgtacgtga tcgtgtgcct 300

gcagctgctg ctgacggtgg ccgtcgccgc gacggtgaac ctggtgcgcg ccatcgggga 360  
 cttcttcttc tcccgcaaca tgggcgccat gttcgccatc atcggcgctca tcgtcgcccc 420  
 catcctcgtg atgattccga tg 442

<210> 477

<211> 368

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-D9

<400> 477

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 acacgaccat tttctacaca ccacttttga gtgaagattt acaggacaaa ggtggtagac 180  
 gactgacatg ttctcagata tggtagcagg ctagtgggtt gtagtacagga tgagtgcac 240  
 cggtagtttg tattgtattg tatctcacgt tctttgtact caagaatttt gttggctgta 300  
 caggcagaag gcggtgcggg tagcatgcct tgcgtacata attatttgaa tacaagttga 360  
 attgaaca 368

<210> 478

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-E10

<400> 478

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 aaagatgatt tctgtttcat ctctggcaca aagatgcgca ctcttgccaa gaaccgagag 180  
 agtctccag atggttttat gtgcccgggt ggctggaagg tactcgttga atactatgac 240  
 agcttggtgc catctgaggg cagcagcaag ctgcgtgaac caattgcagc ctaaaatctg 300  
 gaaaatcctt catataagga atgctactat atcttagcaa gcggttcttt gcgacataga 360  
 accgatgcta tatgattgta tactggctgt aagactttta aacactaggc ttgattcgga 420



tgттаатггт gtgc

434

<210> 479

<211> 487

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-E11

<400> 479

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cagagtttta aggtttccca gcagagaaga gcgcgtgcaa ccaccacatt catataatta 120

ataagcaagg tttagagaag aggcaacatg ggcacaaaga tgaagaaggg gatcctgaag 180

ccgttccgct atatctcaac catcatggat ggtaaggagg ctgaaatgca aattgggttc 240

ccgacggatg taaaacacgt ggcacatatt gggtgggatg gtcctggctc cacgaacaac 300

aacaacaata acaacagcaa caacaatagt ggcgaggacac ctagctggat gaaggattac 360

cactcggcac cgcttgactc gtcctctttt aggagtgaga gtggggggcac ggctgctgca 420

aatcncctggg cttctcaaga gatagtcatg gatggagcaa gcgtcggaga aacctccttc 480

aaggaca 487

<210> 480

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-E2

<400> 480

gggtagaccc acgcgtccgc aaaacatggc tgtgaatgtg agaaccatgt ggtcgtcgat 60

gcggggcacat gttgcgatgg ctgtggcggtt ggtgttcttg gtgagcggcg catggtgcgg 120

tcctcccaaa gtccccccag gcaagaacat cacggccacc tatggcaagg actggttgga 180

cgctaaagcg acatggtatg gcaagccgac ggggtgccggt cccgacgaca acggtggcgg 240

ctgcgggtac aaggacgtga acaagcccc cttcaatagc atgggcgcat gcggcaacat 300

ccccatcttc aaggatggtc tgggttggtg gtcctgcttc gagatcaagt gcgataagcc 360

tgtggagtgc tccggcaagc ccgtggtggt gcacatcacg gacatgaact atgagcctat 420

cgcggcgtac cacttcgatt t

441

<210> 481

<211> 508

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-E3

<400> 481

cgggtagacc cagcggtccg agagacacca agcggtgaac tcgcctaagc agctatcaac 60

caaccctaga aagctagaca ccgtacccat ggctcgcgct agcgtcgtct ttgtcattgc 120

cgctctcctc ttcgctcgcca tggctgtagc accgatggcc gaggcaaagt ccgccgatgc 180

ccctgtggct gacgcgccag ccgatggacc tagcggggccg gctgctgcac ctggccccc 240

gggtgtcgaa ggctgtcag gcaatgagga tgacgatgat gactccacca attgaggcca 300

cacacgtcgg cccgggttaa tttggaacaa gacatggaag aaaattgaga gcaatgtctt 360

aaaaacaatg ataaggtgtg gtcatcaact catcaatgga tacatccttg ctctccctct 420

tttcctttcg gtttgatttc caatgtgtaa ccatgttgta agttaacggg atcgactcat 480

ggtatcagga tctaaaaaat tatcgttc 508

<210> 482

<211> 180

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-E6

<400> 482

ggtcgaccca cgcacccgca caatctgggt ctcagtgaca cactctgcat ctgaaaggac 60

cgatgcacat gtaaagatga aggtatgtgc tcatgctgtg ctagtgaaag ccttaaattc 120

agtgttctgt tgtctctctg gtggcgctact gtcactgttg actggcctac ggatctgagt 180

<210> 483

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-E8

<400> 483

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ttttcttgcc acggcaaaac accttcgcgc gcgagagcat ggcgatggcg taccgtgtcc 120

tggaggtcac cctggtgtcg gcaaagacc tcaagaaagt gtcgctcttc tcccggaactc 180

gcatctacgc cgtggcttcc atctccggat tcgacctccg catcccttcc cacagcacc 240

aagcagacca cagcaacggc tgcaaccctt gctggaacgc cgtggtacac ttccccatcc 300

cggtgcgcgc tgacaccgcg ggcctcgac tccacgtgag gtcgcgcgc cagcgtctat 360

acctgggcga ttgcgacatc ggcgaagtgt ttg 393

<210> 484

<211> 501

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-E9

<400> 484

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gcgtcgattt aatgtgcggc tatggaaggc cttcacagaa tgttttaaca ctctacctgt 120

ggctgctctt atcgatgata aaatattatg tatgcacggc ggactctctc ctgatctagc 180

acacttggat gagataaaga acttgcagcg tccaactgat gtaccagatc aaggctctact 240

gtgtgacttg ctttggtcag atccaggaaa agatgctcaa ggggtggggca tgaatgatag 300

aggggtctca tatacctttg gtgctgacaa ggtttcagaa ttcttgcaaa agcatgatct 360

tgatcttata tgctgtgctc accaggttgt cgaggatggg tatgaatttt ttgctgacag 420

acagcttgtc accatattct cggcccccaa ttattgtggt gaatttgata atgctggtgc 480

aatgatgagt gtccatgaaa c 501

<210> 485

<211> 487

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-F10

<400> 485

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accggtcgca agccagttga ccacacactg ccccggtggcc agcagagcct tgtgacatgg 120  
gctacaccga ggcttagtga agacaagggtg aggcaatgcg tcgatccaag gctcggagac 180  
gaataccctc caaaggctgt agccaagatg gctgctgtgg ccgccctctg cgtgcaatac 240  
gaggggtgaat tccgtcccaa catgagcatc gtcgtcaagg ctctgaaccc cttgctgcac 300  
agccggtctg gcaaccgccc tactgcctcg tcggcctccc acgctgccga gcgatccgga 360  
ctgtgatttc tcctgctgc gacaactttg gggttcacgaa aaaggaccgt cttgtggagc 420  
gttggtgttg ctgtgctgtg actgccaaaag ccttggcgca gagaagagct ttgccatgca 480  
gctgtgt 487

<210> 486

<211> 155

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-F11

<400> 486

gggtcgatcc acgctgtctga aataagtcgt attaataaaa aataaaaaaa aaaaaaaaaa 60  
aaaagaaaaa aaaaaaaaaa gataaaaaaa aaaaaaaata ataaaaaaa aaatagggggg 120  
ggtcgtacta agggttcaag ttttttttca ggggg 155

<210> 487

<211> 447

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-F12

<400> 487

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gcgtcgctca acttccgcat ccagggccac gacatgaagc tcgtggagct ggagggctca 120  
cataccctgc aggacgtgta cgactcgctg gacgtgcacg tcggccactg cctctccgtg 180  
ctggtcgacg ccgaccaggc gcccggcgac tactacatgg tggcctccac gcgggttcac 240

cacgacgcca agtccgcctc egccgtcatc cgctacgccg gctccagcgg cgccccgccg 300  
 gcgccaaca tgaccgagcc accggccggc tgggcctggt ccatcaacca ggccagggtcg 360  
 ttccgctgga acctgacggc cagcgccggc cgcccccaacc cgcagggtct ctaccactac 420  
 ggccagatta acatcacccg caccatc 447

<210> 488  
 <211> 423  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-049-Q1-E1-F2  
 <400> 488

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 aggggcaggc cccagctgag gccgcgtct ccacacccaa ggttgcgccc gaggccactc 180  
 caatctcgt tgaggttgcg gctgatgaac aggtagctga gaagggtgtg gtggaggagc 240  
 cggctgcggc ggccgacgtt gagcatcaga aggctaata ggtggtcgct ccagaggcgg 300  
 ccgtcgccga gcccgatcac aaggaggang aagccgtgga gaagaccgtc gtccaggang 360  
 agaagccagc ggcagccgcc aatgcagang aaaaggctgc caccgccgcc gagaacacga 420  
 cga 423

<210> 489  
 <211> 492  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-049-Q1-E1-F3  
 <400> 489

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 caggcgcggt ggccggggcg gtgcggcctc ctgccccgac ctgggtcgg cgcgcgagg 180  
 cgctggcag ccccgagcct cggcctcggc caggcgcgcg cgacccccag ccccggtcg 240  
 ccggctcgcc ggtcatggtg gctccgatcc gggctcctcc ggcattgggca ggcgggggtt 300

cccccggeta gcagcctctc ctggtgggca cggcctgcc cggcggctca ggaaggcgcg 360  
gcggccccgg cgtgcacagc cgtggtccag ccatggcggc gcgggcacgc agcctcggct 420  
ccccggcggg catccatggc gcagtaaggc cgcgagccc ggcggctagt ctgctcggcg 480  
gggcaccggc ct 492

<210> 490  
<211> 477  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
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<400> 490

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ccatggacag cgatgccgac cgggctgcga tcctggagtg gctggagggtg cagatctcgg 120  
aggccaagga cctggagttc aaccggaagg acgtgctgga gaagatggac aggtggcagg 180  
cggcgctgga ggaggagtcc tggctcgagg agtacagcag aaacgagaac agatacaacg 240  
ttggcaaagg gacgcatctc gtgctcaagc gcgccgagaa agcccgcgcc ctggtcagca 300  
aatgccgggt gatggcgga gctctgatgg cgaaggtagt cgcgtgggag aaggagagag 360  
gcgccaagtt cgagtacgac ggtgaggtgc tgctggacgt gctggatgac tacggaaacg 420  
cgaggaagga gaaggagcan gagcggaagc ggcagcgga ccagcggcgg ctgctgc 477

<210> 491  
<211> 311  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-049-Q1-E1-F5  
<400> 491

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tcagcggcgt gctgggccag ctcaaggga tggccgtcga catgggctcc gagcttgaca 120  
ggcaaacga agcgtggat catctgcaag gcgacgtgga ggagctcaac tccagggtga 180  
agggagcaaa ccagcgtgcg cgcaagctcg tcgccaaata ggccgcctag ctgcaacgtg 240

ggagcttgcg cattcctggg tctggtttgc gccacgattc agcctcgccg gttgattgct 300  
tgctgtagca t 311

<210> 492  
<211> 475  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-F6

<400> 492

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cgccgcgcca tcggcttcaa ggacgcgctc accatccgcy ccaccatggg catggcgggc 180  
caggacatgc agaactgcga cgagcagttc aggcagatcg gcgagaagaa ccccatggag 240  
cagttcgacg cgtcgctcgt cgagatgtcc gagaactgcc gctcgctctc caacatgac 300  
tgatcgatct cttctccac ggacgacaac agagagccg gcgttttggg ccctcgcatc 360  
gtttgtcgcc gctgctaacy ttgcgatgcc catgcccgcg agcgcgctct cgcgcgacaa 420  
taactgatga gttaagtttg ttttgctttg accatctcac atcgttaatt cctgg 475

<210> 493  
<211> 515  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-F7

<400> 493

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tgagccggca cacgatccag gtgtaccgcg ggtcatggac ggcaatcatg ctgacgttcg 180  
acaacgcggg catgtggagc gtgcattcca acatctggga gcggtactac ctgggggagc 240  
agttctacat cagcgtcgtc tcgccggcgc gatcactgcg cgacgagtac aacatgcccc 300  
acaacgccct ccgctgcggc aaggtcgtgg ggctgccgct gccgcgctcc tacgcccccg 360  
cgcgctaaga cgacgaaggc ctcgttttct cctcgtgggc tgaccatcca atccaaactc 420

aaaagaacaa atacgaaaga agcgtagtga aggggaacaa atgaatggat atatgtaatc 480  
 ttgagatgca tgccctctca aatcactgta ctggg 515

<210> 494  
 <211> 405  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-049-Q1-E1-F8  
 <400> 494

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 gaggccgccc tctccacacc caaggttgcg ccgaggcca ctccaatctc cgttgaggtt 180  
 gcggctgatg aacaggtagc tgagaaggtg gtggtggagg agccggctgc ggccggccgac 240  
 gttgagcatc agaaggctaa tgaggtggtc gctccagagg cggccgtcgc cgagcccgat 300  
 cacaaggagg aggaagccgt ggagaagacc gtcgtcgang acgagaagcc agcggcagcc 360  
 gccaatgcag aggaaaaggt cgccaccgcc gccgaaaaca cgacg 405

<210> 495  
 <211> 481  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-049-Q1-E1-F9  
 <400> 495

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 gtaaacatta cattgccatc catattctag gatggtatctt tttgtagctt cagtgtcatt 120  
 cttttgttaa tatgatcgat tgtttttgtg tatgttacct ccttcctcga ctatatgctc 180  
 ccccgctgctg aattgcaaca cacacacgca cccacacca cactggccgc aacgattaaa 240  
 aaagcatcct gcgaagccta gtcagcagtt accgcctctt gggaagctga aatgtgcgct 300  
 tcaggaagtg gctggcgacc tegtctcgc gatggcacag cacgcgcagg atggtgtttg 360  
 gctcactgcg gctccaccgc ctggctcgcg gcggcaacgg taggcgctgc ctctcggaga 420  
 ccgctcgggt gcactcgtac gccgcgatgc caaactctc cagagctgc tccgccgtta 480



g

481

<210> 496  
<211> 481  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-049-Q1-E1-G10  
  
<400> 496

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ctcagggagc tgtcctattc ttgtttctcc tcgtcgcagc agaggtggga accatcgatg 180  
ccaaaatggg agtagccatg cccatgcatg ccttgataat ggagaaagcg aaacagcagg 240  
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agagctttcc cgggtggcgag tgcaagcagg tcgtggccac gcgcaagtgc ttctgcaaga 420  
agccttgcta gttcatcggt cttgctaatt gttgatgggt gcttcattaa tttgatttga 480  
t 481

<210> 497  
<211> 490  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-049-Q1-E1-G11  
  
<400> 497

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caaaccctag gcgttcggcg ggcgtcacca cggcggcgaa gaaaggggtgc ctgcgctcgc 120  
cttgggtgtcc ccgaagtctg cgacggtgca gctcgatccg cctcgtcgag catgtcgagg 180  
agggtccctt gcaaattctt cttgcatgga gcttgcttca aaggagatta ctgtgaattc 240  
tcccatgact gcaatgatca accagataat gtttgcaatt tctaccagaa agggacgtgc 300  
acctttggta gccgttgagc aaatgaacat gttgaagttc attgtaactg cccccaacca 360  
gcaaccactg tagcgcgtgc atcctccaat tcttctcagc tagttgcttc ttccagagat 420

ccccattgca gcgaatgcc aacggattta tgtgaccaa cacagcagat ttgcaagtca 480  
acagcagcac 490

<210> 498  
<211> 485  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G2

<400> 498

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ataaagatac caagttgaaa gaagaaaata ccagattgct gaatggtaac tctatggatt 180  
cagctgatcg gaggccacgg acacaaatga atggaaagca aattgagaat gaaagccatg 240  
ttgatagtga aactgtgaaa acatgatcaa ctatcaagga ggggattttg ttagctaaga 300  
gacgtttcag acgactaaag aaatatggga tgccatccgc tttggtgcct actgcctagc 360  
tccttgacga cttcatgaaa tatagctacg aaggaaatag ttttacatct cgctgttcta 420  
ggcagcagaa gttttgtttg caaaactgta catcttcttc ggctctctca tttgtaaccc 480  
ttttt 485

<210> 499  
<211> 183  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G3

<400> 499

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aatctagctg tggggagaat ctgagtatca ttacgattac gtgtgaggaa gataaagttg 120  
ttcatagggc tcaggatcta gaaagtaacg gattcctact attacaatga ttcaacagat 180  
tat 183

<210> 500  
<211> 472

<212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
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 cacaacacgg ccggcgcgga gcggcaccag gcggtggcgc tccgggtgca gggggacctc 180  
 ggggcgttct acaactgccg gttcgacgcg ttccaggaca cgctgtacgt gcacgcgcgg 240  
 cggcagttct tccgcaactg cgtggtctcc ggcaccatcg acttcatctt cggcaactcg 300  
 ggggcggtgt tccagaactg cctcatcatc acgcggcggc ccatggacaa ccagcagaac 360  
 tcggtgacgg cgcacggggc caccgacccc aacatgaagt ccgggctcgt catccagaac 420  
 tgccgccttg gtgcccgcga gaagctgttc ccggaccgct tcaagatccc tc 472

<210> 501  
 <211> 395  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G5

<400> 501  
  
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 gcgtcgggca accagcccaa gccgaacgcg atcgtggcca aggacggcag cgggcagttc 180  
 aagagcatcc agcaggccgt ggacgccgtg cccaagggcc atcaggggag gtacgtcatc 240  
 tacgtgaagg ccggcctcta cgacgagatc gtcatggtcc ccaaggacaa ggtcaacatc 300  
 ttcatgtacg gcgacgggcc taagcaaagc cgcgtgaccg gccgcaagag cttcgccgac 360  
 ggcatcacca ccatgaagac cgccaccttc tccgt 395

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 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G6

<400> 502

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ccgccccaca ggtagcggag gcaaagaaga agagagcggc ggagagcggc gaggcggcgg 120  
aggcgaagaa gatccaggac gacttctgct cgacgctgtg cgagggcaag aaggggacgg 180  
acctggtcgt gtgcaaggag tcctgcgcgc tctcccagca gtccaacctg gtgctgtacg 240  
gcaggatcca gtgcaagggc aagtgcaccg agcagaaggg catcacggcg ccggccatga 300  
aggtctgcca ggaggagtgc gacaaggcgt acgtggtgaa ggcggccgag gtcaccaagg 360  
cctgcagcgt cacctgcgcc aaggagaaga acccgcgcct cagcgagaac tgcaagaggt 420  
cctgcacccc tctccttct tgaagcgaag ccccttgaaa tgaatgaacc atgcatgcat 480  
gcatgcatgt atgcatgcgc cggggtga 508

<210> 503

<211> 507

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-G7

<400> 503

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cctgccacc aacaatggcc tccaggtcct ccctcctact tgcaacggcg atgctggttg 120  
cgctgtttgc ggttggtttg tgcaccaccc cgctcacctt ccaggttggc aagggatcca 180  
agcctggcca cctgacctc accccaatg ttgaaccat atctgacgtg gagatcaaag 240  
agcacggggg cgatgacttc tcttttacgc ctcaaggngg gcccgcggg cacttgaacc 300  
ctcaacacaa aggccccct cagttacccc ctttgcatcg gctttgcggt caattccggt 360  
ggcaacggca tcgccaacaa cttcatcccc gccaatcca aggcgggaac aacttacaga 420  
acaacactca ccatctaata agcctctgat gatgaattat atttcaaaag agctcacctg 480  
ccgctcacgt aagcaagaca atatattt 507

<210> 504

<211> 417

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-041-Q1-E1-G5  
  
 <400> 504  
  
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 cacatcaagt cgcgatggag atgaagaagg tcgcctgcgc cgtcctcgcc gccgccgcct 180  
 ccgccaccgt ggtcctcgcc gccgaggccc cggcgcccgc ccccaccagc gcctcctcgg 240  
 ccgcgttccc ggccgtcggc gccgtgctgg ggcctccgt gctctccttc ttgcctact 300  
 acctgcagta aaattaaagg agggtcggag ggagatgctg ctggctgcca ttgcctgtat 360  
 tcggttgat tccgtttata tatatatatta agtacttta tttgggtctg aacatgt 417

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 <213> Zea mays  
  
 <223> Clone ID: LIB148-041-Q1-E1-G9  
  
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 aggtgccgcc cggccccaac atcaccacca actacaacgg caagtggctc accgccaggg 180  
 ccacctggtg cggtcagccc aacggtgccg gcgctcctga caacggcggt gcgtgcggga 240  
 tcaagaacgt gaacctgcca ccctacagcg gcatgacggc gtgcggcaac gtccccatct 300  
 tcaaggacgg caagggctgt ggctcatgct acgaggtgag atgcaaggaa aaacctgagt 360  
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 aac 423

<210> 506  
 <211> 391  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-041-Q1-E1-H1

<400> 506

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caagttttca tgtctgatct cgacattcag atcccaactg ccttcgatcc cttcgctgag 180  
gccaatgctg gggactctgg tgcggcagca ggggtcaaagg actacgtaca cgtgcgcac 240  
cagcagcgta atggtcgcaa gagcctgact accgtccagg gattgaagaa ggagttcagc 300  
tacagcaaga tcctcaaaga tctcaagaaa gagttctgct gcaatggtac agtgggtccag 360  
gacccagaac ttggacaggt cattcagctc c 391

<210> 507

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H2

<400> 507

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attcttggat cgaattagac gacttcttcg tccctctctt cattagcacg ctaacttgta 120  
atctgcagga tctaagcaaa gacttgattt agttatggac ggattggtag gcctcttgaa 180  
agttcgcgtg gtccggggta tcaaccttgc ctaccgcgac gcaagaggca gcgatccgta 240  
tgtcgtccta cggcttggca agaagaaact gaagacaagc gtgaagaaga gatccgtgaa 300  
ccccatatgg caagaggagc taactctgac cgtcacagat ccagccaac cactgaagct 360  
ggaggtgttc gacaaggaca ccttcagcag agacgacccc atggg 405

<210> 508

<211> 428

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H3

<400> 508

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taaggaaagg tcccgcctt ttcctccgac atccacaggg gggaggggaa aacacgtgca 120

ttcaccggc ggcaataatg gcctcggttc cggctccggc gacgacgacc gccgccgtaa 180  
 tcctatgcct atgcgtcgtc ctctcctgtg ccgcggctga cgaccccaac ctccccgact 240  
 acgtcatcca gggccgctg tactgcgaca cctgccgcgc cgggttcgtg accaacgtca 300  
 ccgagtacat cgcggggcgcc aaggtgaggc tggaagtgca ggcacttcgg caccggcaag 360  
 ctcgagcgcg ccatcgacgg ggtcaccgac gcgaccggca cctacacgat cgagctcaag 420  
 gacagcca 428

<210> 509  
 <211> 409  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-041-Q1-E1-H5  
 <400> 509

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 atcacctga ccgtctgcgc gcggcggtc tcacacaccg gcgacacgca gggcgcgcat 120  
 aggcgagggc ctcccccccg gcgagggatg gtgtggtcgg ctgggatggc aacaatgcga 180  
 ggcgcctccg ccgccgcgct actggtgctg gcgctcgccg ccgccgtggc gcgcgcggag 240  
 gaccctacc acttcttcga gtggaaggct acgtacggga cgaggaccat catggggacg 300  
 gcgcagaagg tgatcctcat caacgacatg ttcccgggcc ctaccatcaa ctgctcatcc 360  
 aacaacaaca tcctcgtcaa cgtgttcaac atgctcgagc agccgctcc 409

<210> 510  
 <211> 419  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-041-Q1-E1-H6  
 <400> 510

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 gaggagcaac cgccggaacc agcggcaccg caagatgaga aagaagagga caactaggat 180  
 cggagcgacc aacaaccacc catgcatata tatcacgcag actgaagtct acacgtttgc 240

catatttctt tacgacgacg acgcttcttt attccctcct cccttttttt tcctcttaat 300  
 ctctctgtga acccggttta tcatcacgct gcaatcaagt gtgccagatg ccttcgttac 360  
 gtctgaggct caccacaatg gaaaatctga catggacctg tcttagcctc gccgaaaaa 419

<210> 511  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-A1

<400> 511

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 tcaaccaatc aagtcgtacg tcgtcagcat caccgcgacc gatggcgcg cccgcgtcca 180  
 gctatgtatc caggaggggg ctctccgcag cgatgacggt ggcggaggac tccgtgaaga 240  
 aggtggagga caaggcgggtg aagctgggaa ctgtggccaa ggacatcgcc agcgccatgg 300  
 ccaccacgac ggaggagaag acggcgcttct gggaacctga ccccgagacc ggatactacc 360  
 gtccggtcac cggcacgaag gaggtggacg ccgccgacct gcgcgccgag atgctcaagc 420  
 ggagga 426

<210> 512  
 <211> 208  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-A10

<400> 512

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 gccagccggc cggggatcag cgacgtcgtc gcggcgctct ccttcctcgc cgacccgcaa 180  
 tactaccctc ccggaggcac ggaagctg 208

<210> 513  
 <211> 208



<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-042-Q1-E1-A12  
  
 <400> 513  
  
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 gaaggaggcg ggccccaaca tctccgtcaa gggctacgac gtgatcgagg agatcaagac 120  
 ggagctggag aaggagtgcc ccaacgtggg gtcgtgcgcg gacatcatct cgggtgagcgc 180  
 ccgcgactcg gtgaagctgt cgggaggg 208

<210> 514  
 <211> 386  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-042-Q1-E1-A2  
  
 <400> 514  
  
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 aagatcccat gcaccggcgt caccatggac gacgtcaaca tcaagtacag tggcaccaac 120  
 aacaagacca tggccgtatg caagaacgct aagggcagcg ccaagggttg cctcaaggag 180  
 ctgcgatgct tctagaacca ccatcgaccc atctctctag ttatacaatg tgtttgggtg 240  
 ttggatgctg agagattggt tctcagctca gatgcaagct gcgcctagcc tgtgtaggtt 300  
 tgtgctggta cattgagagc tcttatttat ttgctttgat tgcaattaac caggatgacc 360  
 atagcccttg tttggtttgc tgtttt 386

<210> 515  
 <211> 417  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-042-Q1-E1-A4  
  
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 aacatccgcg tctggcgcaa gcagaaggac tcgggagggt tcaagtcctc gagcggcctc 120  
 gtgaatgcga tcgtcatgtc cggcgagcgc atcttcacgg gccaccagga cggcaagatc 180

agggtgtgga aggtgtcggc caagaacggc atgcacaagc gcgtcggcag cctgccccgc 240  
 ctgcgcgact tcctgcgcgg ctcgctgaac ccgtccaact acgtggaggt gcgcaagaac 300  
 cggtcggcgc tgtggatccg gcacagcgac gccgtgtcgt gcctgagccc gacggacccg 360  
 gcgcaggggc tgctctactc cggctcgtgg gaccgcacct tcaaagtgtg gcgcatac 417

<210> 516  
 <211> 421  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-A5

<400> 516

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 ggtgctcctg gcgggcggca acgagcggag ctctcgtgcgc gccgaccacg ccacggtgga 180  
 ggaggacttc cggagcctga ggcgcgcctt ctccacgtgc ggggaagggc tgggtccccga 240  
 ggacgtggtg gcgcgggagg cagagacggc cgaggccgtc gtggagctca tggcacgctc 300  
 cacggactac ctcatcgacg cgttcagcgt cgccacgtgc gactccatca gcgaggacgg 360  
 ccgcgccggc gcagggcggg gcacgccgtt gccgccaag acgcggacgt gggacccccg 420  
 c 421

<210> 517  
 <211> 383  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-A6

<400> 517

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 tggaaacgga gcagcagggc gtggttgccg cggatgaagc gacgcttgcc aaggggacgc 180  
 cgtcggcgtc gttccggctc cgcaacggga gcctaaacgc ggtgcgcctc cgccgcgtgt 240  
 tcgacctgtt cgaccgcaac ggggacggcg agatcacggt ggacgagctg gcgcagggcg 300

tggacgcgct gggcctagac ggggaccgcg gcgggctggc cgccaccgtt ggcacctacg 360  
tgcccgcgacg cgccgcgggc etc 383

<210> 518  
<211> 411  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-A7

<400> 518

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agaacccgtt caacaagcgg cggcgggtgc tgcgctactg cgccaccgcg tggaggcccg 120  
cgcgtcggcc tcgctcgccg ccgccgccgc cgccgacgta ggcagcggct gtggctagca 180  
ctgaagaaga catgtacgag cacgcagcga tgaagcaggc ggacggacga attgaaatga 240  
aaacacacca gctagcaagc atgaagatgg atcctctcct gttttgggac cccttctctc 300  
gtcttcatca gcatccgacg gcgtcatgca tgcattggata tataccacgt acctagtggg 360  
aaactgatat ataggttatt tcgttttttc ttttttttgt tgtgtgtggt t 411

<210> 519  
<211> 344  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-A8

<400> 519

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gtcaaacaaa ttttgtcgag aatttaaata cgggtatata tatagagaga agctacgcac 120  
aacgacagca atggcagtag tttttttctt ttcttttttg ggtgtgtatg tgtaattgtg 180  
tatatatata ctgtcgtagc gccaccgcct cctccaccgt ccaacggcac gtacggccgc 240  
gacgacgacg tcaatgtatg gtgtgcgacg ggtggagcca ggctgcgtga cctggcaggc 300  
aggcagacca taccagacca gaccgaccgg ctcggcgaca acgg 344

<210> 520  
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<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-042-Q1-E1-A9  
  
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 cgctagtttg tgccccgctg atagcagagg caaagaagaa gagagtcgcc gccgccgccg 180  
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<210> 521  
 <211> 56  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-042-Q1-E1-B1  
  
 <400> 521  
  
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<210> 522  
 <211> 219  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-042-Q1-E1-B11  
  
 <400> 522  
  
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 gaagtaccgt gatactaaag tcaggatgaa ggaacccctg gagcaattta accaaaccaa 120  
 ggacgctagt gattacttat ggtacaccac aagctttcgc ttggagtcgg acgatttgcc 180  
 ttttagaaat gacatccggc ctgtgcttca ggtcaaaag 219

<210> 523  
 <211> 235  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-042-Q1-E1-B12  
  
 <400> 523

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 ccgcgccac atcgacggca agctccgcta cggcttcaac ggcattctcc acagggacac 120  
 cgagaccccc ctcaagctcg ccgagtactt caacgtcacc gacggggtgt tcagctacaa 180  
 ccagatgggc gacgtgcccc ccgccgttaa cgggccactc catgtcatcc ccaac 235

<210> 524  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B2

<400> 524

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 cccccggacc agcagcgtct gatcttcgcc ggcaaacagc tggaggatgg ccgcacccta 180  
 gcagactaca acatccaaaa ggagagcacc ctccaccttg tgctccgtct ccgtgggtgg 240  
 cagtaagtca tgggtcgttt aagctgccga tgtgctgcg tcgtctggtg ccctctccat 300  
 atggaggttg tcgaagtatc tgctgttcgt gtcagtgttg gtttaataat ggaccggttg 360  
 tgttgtgtgt gcgtactacc cagaactatg acaaatcatg aataagtttg ttgtttgaaa 420  
 ttaaag 426

<210> 525  
 <211> 408  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B3

<400> 525

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 gttgggtttg tcgtcaccgg ccgcattac tgcgacaact gccgcgccgg gttcgagaca 180  
 aacgtgtccc acgccatcca aggcgcgacg gtggagatgg agtgccgcca cttcgagtcg 240  
 cagcaggtcc acgacaaggc ggaggcgacg acgggccccg gcggctggta caggatggag 300

atcagcggcg accaccagga cgagatctgc gacgtgcgcc tgctcaagag ccccgaggcg 360  
gactgcgccc agatcgacca ctcccgcgac cgctgccgcg tcccgcctc 408

<210> 526  
<211> 370  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B5

<400> 526

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gccctgcccc gcttgcgcg gctggcgcg cagcatcgcc gccacgcccc gcgccgcgcc 180  
ggcgcgaccc agccagcggc gcaggccgcc gactgccgaa cggcgcgccg gcaagcctgc 240  
atgcgccacg ttcacgaagc gcttgccggc ctacagacatg gttcgtctgc ggcagcacgg 300  
tcaaggccac cagggccagc acgcgggcgc ccatcaggat acagcgccgg cgcaaggcc 360  
acgccggtgg 370

<210> 527  
<211> 329  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B6

<400> 527

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gcccaccaca cctaggttgt ccttatcgtg ctcgtcgttc ggccacatgg tgaccccgcc 180  
caccgacaca ccgccgatca cggccaccaa gaagcaggac gacaagccga agccgacgcc 240  
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cgctgcccgc gctttccgcc gcatcaggt 329

<210> 528  
<211> 416

<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B8

<400> 528

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 ccggtcgtcg atcgaggaac caagctgctg ctgctgctac cggacgacac caaccatgat 120  
 acggaggacg acggtgtgcc taggcctgct gcttctacta ctggcggcgt cgactgcgac 180  
 ggcacatttc tcgatcggcg acgtggacga gtacttgaac aggcgcacgc aggagtcccg 240  
 ccacaggaac cacggcggcg cgcagatcaa tgacctcatc tccagtgtg cgcgcttcca 300  
 cgccaacgtg gatgcacgcg cgtatggctg ccgctccaac ctgcagctgc aggaggagga 360  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B9

<400> 529

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 tgggtccttc gacatcacca agttggggcg ctccggcaat ggcaagacag acagcacgaa 180  
 ggctgtgcag gaggcattgg catcggcgtg cggcggcaact 220

<210> 530  
 <211> 208  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C12

<400> 530

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208

<210> 531

<211> 426

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-042-Q1-E1-C2

<400> 531

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tgctagcggg gccgcccgat gtcgccaacg ccggccacgc caagccccta acgcctggcg 120

ggcgcggtgt acacgacaac cagggcaagt tcacggccgg gccgtggaaa cccgcccacg 180

caaccttcta cggcgggcgt gacgggtccg gcaccacggc gggcgcggtgc ggggtacaagg 240

acacgcgcac gcaggggtac ggcgtgcaga cggtgcccggt gagcactgtg ctgttcgggtg 300

acggcgccgc ctgcggaggg tgctacgagg tgcgtgctgt ggacagccct agcgggtgca 360

agcccgcgcg ggcagcgtgt gtggtgacng tgaccgacct gtgcccgcgc aaggaccaat 420

ggtgca 426

<210> 532

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C3

<400> 532

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tagagatgct ggccgacaag cccacgtact ccacgttctt gaagctcctg caggacacca 180

aggtcgccgg cgaggcgaat cagctccggg cggcgacgct actggtcgtc cccgacaaac 240

ttgccaaagg tctgggggtcg ctgcccgcgc ataagggtgc gggggcggtg gagaaccacg 300

tcctttctca ttacttcgac cccatcaagc tggacgagat gaagacacgc accgccatcc 360

tccccacgct gctctccgtc accgaaaaga aaactcggcg tcttcaacta cacca 415



<210> 533  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C4

<400> 533

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tgtacgccaa ctgggagttc tgcaagatgc aaggcatcgg ctggggctgg ggcggcgcca 180
tctgggcgtt cagcgtcgtc acctacttcc cgctggacgt gctcaagttc gccatccgct 240
acgcgctctc cggcaaggcc tggaacaaca tcaacaacaa gacggccttc accaaccgca 300
ccgactacgg caagggcgag cgacaggcgc agtgggccac ggcacagagg acgctgcacg 360
gcctcaacca ggccaacgcc acctccgacc tcttcggcga acaccagggg taccgcgag 419
  
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<210> 534  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C5

<400> 534

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tagatggaca ctacgacgag aagaggaaat ccaatgtgga atacacagag gacgagaaga 180
aagccgtgat cgcggtcttg aaaaagaagg ctttgagcgc ctacacagaag tttaggcatt 240
ccatgaagag ggggaggaag agcagcaagg tgatgtccat ctcgattctg gatgagcgtg 300
aacctgagga ggtgcaggct gtggatgcct tccgccagct tcttgactt gaagagctgc 360
taccatcgca gcatgatgac taccacatga tgctaagatt tctcaaggca agaaagtttg 420
atatcg 426
  
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 <211> 431  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C6

<400> 535

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gagaatcccg tcgaatcccc ctctcaacca agggcgcgcg cgcggtgcgta tgcctcctcc 180

agatccaaag caacagacag cgagggggca ccgggggtccg ccgcatgttt gcgatttatg 240

gaggatcatg ctttcttgct tactacatta gctcctgacg cgccgccctc ccctcgcgtt 300

cattgatttc tgttataatt actaccgagc tactatctcc acattattat tggtaaagaa 360

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caacagttga t 431

<210> 536

<211> 286

<212> DNA

<213> Zea mays

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<400> 536

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cagggactaa ccaagtctga aaaatatcag ttaatgatgc aaagccagca tcgatgcac 120

ataaacgatg actgaatgag ccaggcgtgt gtgtttttat aagctgagac gtaggaaaat 180

gtacaagatc ccatagaggg gtgcctgatc aagggtggga gcttgcatcg gaagtggcag 240

caggaggcgg cgaaggcttg cttctttggc ggctgagcaa gttgtg 286

<210> 537

<211> 334

<212> DNA

<213> Zea mays

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gcgacagcgg ggggccggcg gacgctatgt ccgttgtgga ggccgtgggg cccaccgggc 120  
 gcggcgatcat acgggcagcc actgtgatgc tgcggggcga ggaagatgaa ggacgcgggc 180  
 gtgggtccaag accaagacca cgaccacaga tgcagggtcg tcgttgcggg gtggttaagaa 240  
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 atccatcggc gcggcgcccc aagactgcga ccac 334

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<223> Clone ID: LIB148-042-Q1-E1-D10

<400> 538

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 catgggttgc ggtggctcca aggaggccgt ggccaccggc aacaccagcg ccggcagcaa 180  
 ggtcctccgg aggaagtcct cctccgtctc caccggcg 219

<210> 539  
 <211> 214  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D11

<400> 539

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 tcatgcacaa cctgcggcag tacgagcggc cgttgcaccg ctacatcgcc atgatggacc 180  
 tgcaggagcg caacgagagg ctcttctaca agct 214

<210> 540  
 <211> 236  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D3

<400> 540

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cgctgatgag gtgcaaccag ggatctgtct tctccaact gttgtagaag ggggccggtg 180  
acctccaggg tgaagatgat cggggtcacc tggggcccgt ggccacggca ttagca 236

<210> 541

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D4

<400> 541

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tctctgtcct cctcgctcgg cttccccggg tcttgagagg ggaaagagga ggcggaggag 120  
agggatgggg agggacgaga ggttcccagt gtgggaggcc gcgctcggcg ctgggggtcgc 180  
cgccgccttc gccgctgggc tcgtcggggg ttacctttcc atgcgggact ccgactacag 240  
cttctcaag ctgccacgta atctccagga actccaaatc ctcaactggcc atcttgagaa 300  
ctatactagc gactacaccc tacagggtgtt ggtaggctac tgcgcggtgt acatcttcat 360  
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<210> 542

<211> 348

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D5

<400> 542

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cgatgacacg gacgatgtgc ctaggcctgc tgcttctact actggcgggc gcgtcgacag 180  
cgacggcgca tttcacggtc ggcgatgtgg atgagtacgt gtccaagcgc acgcaggagt 240  
cccgccacag gaacaacggg ggcgcgggca tcgatgacct catctccagt gcggcgcgct 300

tccacgccaa cgtggatgca cgcgcctatg gccgtagatt cgacctgc 348

<210> 543

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D6

<400> 543

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atggcagccg acgatcaacc gccggaatcg gcgccaccgc aagacgggga aggagaggac 120

aactaggagg aatggaccgc caccaatata tatcacacac acacacacac actcacacat 180

tctcacactc aagtctgcgt ttgccatttt tcattttcttt ttctctacga cttcgttatt 240

ccctcctttc atctatctct ccgtgaactc ggtttgctgt ccagctggct gtaagtgtac 300

cagatgcctt cgttacgtct gattaggctc atgacaatgg cgattttggc atggagttgt 360

gttagcctcg cggaaaaact gtgactgtgt tagcagatat gctatatatt gtcctaaca 420

tgttgtc 427

<210> 544

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D7

<400> 544

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caccaacacc gtcattggcg tcggtgacga ctgcatctcc atcgggcccc ggacctccaa 180

ggtgaacatc accggcgtga cctgcggccc tggccacggc atcagcatcg gcagcctagg 240

gcggtacaag gacgagaagg acgtcacgga catcaacgtc aaggattgca ctcttaagaa 300

gacgatgttc ggcgtccgca tcaacgcgta cgaggacgcc gcctccgtgc tcaccgtctc 360

caagatccac tacgagaata tcaagatgga ggactcaacc aacccccacc ttca 414

<210> 545

<211> 420  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
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 gggggccggg gggggcgggt gggggggggc gggggtgcgg gggggggggg gggggggagt 240  
 gcgggggggg gggggggggg ggggcgggtg gggggggggc ggggggggag gggcgggggg 300  
 gggggggggg ggaggggggg gaggggcggg ggtggtgggg ggggggggtgc ggggggggag 360  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-042-Q1-E1-E10  
  
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 acatcgcggg cgccaagggt aggctggagt gcaagcactt cggcaccggc aagctcgagc 180  
 gctccatcga cggggtgacc gacgggaacg gcac 214

<210> 547  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-042-Q1-E1-E12  
  
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ggcctgggtgg gtccttcgac atcaccaagt tgggcgcctc cggcaatggc aagacagaca 180  
gcacgaaggc tgtgcaggag gcatgggcat cggc 214

<210> 548  
<211> 366  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-042-Q1-E1-E5  
  
<400> 548

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cgtcaaggac gtcgtgaatg atgcccgggc tgccggcgag gtgatgacgc ccgccgacgc 300  
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agagga 366

<210> 549  
<211> 427  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-042-Q1-E1-E7  
  
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caaggttggg gccgccagca ggttcagccg ttctgttct tgctaaaacg agagaaggat 120  
ggcagtgtct cagggagctg tctattctt gtttctctc gtgcagcag aggtgggaac 180  
catcgatgcc aaaatgggag tagccatgcc catgcatgcc ttgataatgg agaaagcgaa 240  
acagcaggag acggagaaga aggaggagaa aagcacggag aaggaagaga gtcaatgctt 300  
atcgccgagt ctccagttcg agggcttctg cttcaacagc gacagatgcg ccgatgtgtg 360  
catgaaggag agctttcccg gtggcgagtg caagcaggte gtggncacgc gcaagtgctt 420

ctgcaag

427

<210> 550  
<211> 420  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-042-Q1-E1-E8  
  
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ttggtatcgc tgatgtacca gtttaatttg gtgccccgtt atttgttctt tccctcgaga 180  
gagggatcga cacctgtacc attgcttgcc atttgtctgg accagttcaa caattcaatt 240  
taaccatcgc gtaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300  
aaaaaaaaaa aaaaggaaga aaaaacaaaa agataaaaaa taaaaataaa cataaaaaaa 360  
aaaaaagggg cggcccccca aagggttcaa actttaattc ccggtgcacg gaaattaaaa 420

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cgtgacggcg cccgggggaca gcccacacac ggatggcatc cacatgggag actcatccgg 180  
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cagcctaggg cgggtacaagg acgagaagga cgtcacggac atcaacgtca aggattgcac 360  
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<210> 552



<211> 208  
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 ctgctggggc ggcggaacgt atgcgctcga gcatggatga cgtcccgggc aacttctccg 180  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-042-Q1-E1-F11  
  
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 cgggcccgggg agagagatgg ggccggactc gtcgcccaag aagttgagcc tcaaggagca 180  
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<210> 554  
 <211> 216  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-042-Q1-E1-F12  
  
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 catccgttga tccatcttgc taataaccct gcgtgccctt cgttctcgtc tcgatcccga 120  
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<210> 555

<211> 389  
 <212> DNA  
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<223> unsure at all n locations  
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<400> 555

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gccactccaa tctccgttga agttgaggct gatgaacagg taactgagaa ggtggtggtg   180
gaggagccgg ctgcggcggc cgacgttgag catcagaagg ctaatgaggt ggtcgctcca   240
gaggcggccg tcgccgagcc cgatcacaag gaggaggaag ccgtggagaa gaccgtcgtc   300
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accacgacga cngtggangc gaagaagaa                                     389
  
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 <211> 436  
 <212> DNA  
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<223> Clone ID: LIB148-042-Q1-E1-F4

<400> 556

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cggcgctcggc gacgactgca tctccatcgg ccccgggagc aagatgatcc gcatccatgg   180
cgtcaagtgc ggcccaggcc acggcatcag cgtcggcagc ctggggcgct acaaggacga   240
gaaggacgtg gaagacgtgc aggtgacggg gtgcacgata gccggcacca cgaacggcct   300
gcgcatcaag tcgtacgagg actccaagtc gtcgctcaag gccagcaagt tcctgtacga   360
gggcatcacc atggacaatg tctctaccc catcatcacc gaccagaagt actgccccaa   420
caacatctgc gtcaag                                     436
  
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 <211> 438  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-F6

<400> 557

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agtgtcgcgc gaggaagccg atccgcgggc actgccggca cagtggacca ccgcgaagaa 180  
gtacaaggcc acgatggacg ccaagacgcg gcaggctttc gacggcgtgg tggccgccgc 240  
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cgtgtccctg tccaaggcga cgtcttccgc ggacgagaac aactacgtga gcgtggccgc 360  
cgcctacgag aaggccgcgcg gcgccgtcat cgcggcgacg ccggacaaca agctccgcgc 420  
atggcggttc cgttcgac 438

<210> 558

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-F7

<400> 558

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acctcttctt tcccatcctc cttatctcca ccgcgcccgc cgtgcgggcc atcaccgacg 180  
ccgcggcgcg ccccggtatac ctccaggagg cgtgcaacaa gacgctgttc cccaaggtgt 240  
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ggctggccga gctgctcgtg tacgtgtcgc ccgaggtggg catgaccgtg gccgcgttcg 360  
cgcaccacga gctcaacgcc atcaatgacg acgacgtcct gtacaagtgc atcgacacct 420  
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<210> 559

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-F8

<400> 559

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gaatacatgg agtgtaatct ctaccaactt atgaaggata aggtcaagcc tttctcggag 180

tctgaagtcc gcaactggtg ctttcagata tttcaggctc ttgcttacat gcatcagagg 240

ggctactttc atcgtgacct caaacctgag aatctgttgg ttagcaaaga tgtcataaag 300

ctagcagact ttggtcttgc aagggaagtt tcatctttgc cgccatatac agaatatgtc 360

tcaactcgct ggtatcgggc accagaagta ttgctccagt catctgctta tg 412

<210> 560

<211> 222

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-F9

<400> 560

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ttgtgcacca ccccgctcac cttccaggtt ggcaagggat ccaagcctgg ccacctgac 180

ctcaccccca atgttgcaac catatctgac gtggagatca aa 222

<210> 561

<211> 369

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-F11

<400> 561

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atctactgcg acaactgccg cgccgggttc gagacaaacg tgtcccacgc catccaaggc 180

gcgacggtgg agatggagtg ccgccacttc gagtgcgagc aggtccacga caaggcggag 240

gcgacgacgg gccccggcgg ctggtacagg atggagatca gcggcgacca ccaggacgag 300

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<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-034-Q1-E1-F12  
  
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tttcccaga tgggaagcca ttaaaaccag cggatctcac ctcggggcgc gtccgcggca 180  
tctgggcaag cgagtggtag agccagcagc catgagatgg tatgcatcg tagcctcctg 240  
agggcgctgg tctgagtgcc ggcggcgtct gcgggcaggc gccgggggcc caggatcctg 300  
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cgggcagtca cggaaggat gatgctggac t 391

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<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-034-Q1-E1-F3  
  
<400> 563

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gcggcgccgc agaacctgac ggcgagcag gcggcgccgc gagcgctgga gtcgacgtcg 180  
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gccccggcgt cgatgacgt gttcgacttc atgggctggc acttcgacca ggacgagctg 300  
atgaagcgca gggaggacgg cacactggac gcggacgggg aggccatgct cctcaagaag 360  
gcgcctagca tggcccccaa gaagttctcc tacgtcgaca gcctctctc cgggggcatg 420  
aggagcccct ccgcgcgcca ctgat 445

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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-034-Q1-E1-F4  
  
 <400> 564

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 tcgcgttccct ctcgagcggg gtcaccgagc aggcccagct gccggccgtg ctcgagggtga 180  
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 tcgcccgcgg ggaccacgcc gccgtggccg cggacttcgc gagcttgaag cgcctgttct 300  
 gcagtttcgg ggtcggggag gaggcggtcg agaggagac ggtgcgggcg gaaggggtgc 360  
 tggcgtcat ggccgttcg acggaacagc tcattcatga gttgctcggc cactatgctt 420  
 ccactccgat gagag 435

<210> 565  
 <211> 414  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-034-Q1-E1-F5  
  
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 atttgtgaag acgacacgta tctaagaaa caagctttgt ttgatgggga aacacaatta 180  
 gctggagacg agcattctca gtcacagaaa atttcccggt gccggattga acatcctcac 240  
 gtgtcacctc ttacagagga acttatcccc atttcaattc atacccttgg atcaccttat 300  
 tcttgtgatg tcccgatggt tgaagaggcc atagacgcca tctgcaagag ccacggaaca 360  
 ccaccagatg agaagattgc catcacaaa gctattataa atgtatcgaa tgga 414

<210> 566  
 <211> 411

<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-F6

<400> 566

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 cgtggagatg aaagagcacg ggggcgatga cttctccttt acgctcaagg agggcccgac 180  
 cggcacctgg acgctcgaca ccaaggcccc gctcaagtac cccctttgca tccgctttgc 240  
 tgtcaagtcc ggtggctacc gcatcgccga cgacgtcatc cccgccgatt tcaaggccgg 300  
 catcacctac aagaccacac tcagcatcta atcagcctct gatgatgaat tatatttcaa 360  
 aagagctcac ctggcgctca cgttagcaag acaatatttt ttctatgggt a 411

<210> 567  
 <211> 187  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
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<400> 567

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 gggtaattan cccccgggtt ctcatgctcg ggtttggttt actggtttga ctgttgcgta 180  
 acatttc 187

<210> 568  
 <211> 371  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-G11

<400> 568

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caaggggaatg cgagaagtac agtgagcgat ttgttggggc atgcatgac gcagacaact 180  
gcgccaatgt gtgccgcggt gagggcttct tggccggcag gtgcagcacc ttccgccgcc 240  
gctgcatctg cactaggcag tgctaaacaa gatcgctcga tcgttcgcca tgcacgcaca 300  
acctattctt aataacgttc attatctcgt tcttatttat gacgaatgtc atgtatgttc 360  
tggtgactgt c 371

<210> 569  
<211> 152  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-G4

<400> 569

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aaagggcgga cgcacaaaaa agatcaaaaa cttaaataaa catgcatgca aaaatcaata 120  
actcttcggt aggggtcacc tatcattcaa tt 152

<210> 570  
<211> 197  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-G5

<400> 570

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tgcatgaagc ggattatatt ggactgttgt actgtgtact accttgttta ttccatgatt 180  
aacatattgt tatattg 197

<210> 571  
<211> 363  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-034-Q1-E1-H1

<400> 571



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 cggagattct tgancttggg attgtatcgc actcagtgat catccggcta tctttgggcy 180  
 tctcacagaa tccttgcacc atcaaacctc taagtgtctg tctctccttc caccagtttt 240  
 ttgagggctt tgcatttggc ggctgcattt ccgaggctca gttcaagagt ttctctgcac 300  
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<210> 572  
 <211> 347  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-034-Q1-E1-H11  
 <400> 572

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 gcggttggtg ggcgtgtccg tcgcggcgaa catctcgggc ggccacctga acccggccgt 180  
 gacgttcggg ctggccgtgg gcggccacat caccatcctg acgggcgtct tctactgggt 240  
 ggcccagctg ctgggcgcca ccgtggcgtg cctgtcctc gggttcgtca cccacggcaa 300  
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<210> 573  
 <211> 317  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-034-Q1-E1-H3  
 <400> 573

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 ggagggcccc agctgaggcc accatctcca caccgaaggt tgcacctgag accactacca 180  
 tccacattga ggttgcggca aaacatgcag tagttcagaa ggtggaggag gacaaggagg 240

aggcactaac agtggcggcg aaacaagagc cagcagccac cattgagcct cagcagattg 300  
ctagtcaggt gaccact 317

<210> 574  
<211> 415  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-H4

<400> 574

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gtcgggctcg ccgagtactt caacaccacc gacgggggtgt tccagtacga catcatcggc 180  
gacgtgccgc cctccaagtc cgcgcccacc aagatggccc ccaacgtcat ccgcgccgag 240  
ttccgcacct tcatcgaggt ggtcttcgag aaccccgaga agagcatcga caccatccac 300  
atcgacggct acgccttctt cgccgtcggc atgggcccgg gcaaattggac gccagcgtcc 360  
cggagcacgt acaacctcct ggacacggtg agccggcaca cgatccaggt gtacc 415

<210> 575  
<211> 402  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-H5

<400> 575

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cggcggcggc aaaaagaagc cccacgtcaa ccacggcaag tttaaggcgg agccgtggac 180  
ggacgggcac gcgacgtact acggcgggcg cgacgggtta actgacacca cggacggcgg 240  
cgctgcggc tacaaggcg agctggggaa agactacggc accctgacgg cggccgtggg 300  
cccgtcgtg tacaccaacg gcaccgggtg cggcgcgtgc tatgagctca agggcccca 360  
gggcaccgtg gtggtgacgg ccaccaacga ggccccgcg cc 402

<210> 576  
 <211> 364  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-035-Q1-E1-A1  
  
 <400> 576  
  
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 gctgctctgc ctgtaccacc tccttttccct ctccctgtcc gtcccggacc cggcagcagc 180  
 agcagcagcc gtcccccgcc gcgccggtgg ccaccgtggc agcaacgttc cgtccgggtc 240  
 aggaaccgcc aacgtcgtcc tccgcttcgg cctgtccggg cagccgctcc gcctccacga 300  
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 gctt 364

<210> 577  
 <211> 340  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-035-Q1-E1-A12  
  
 <400> 577  
  
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 gctacgacgt gatcgaggag atcaagacgg agctggagag ggagtgcccc agcgtggtgt 240  
 cgtgcgcgga catcatctcg gtgagcgccc gcgactcggg gaagctgtcg ggagggcccg 300  
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<210> 578  
 <211> 447  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-035-Q1-E1-A2  
  
 <400> 578

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 ggcgaggggca agggccaggt aaggaagcag tgccgcctgg tgaacgggca ggagaaggag 240  
 cagaagcagc agcagccacc ggaggagcag gaggagcagc agccaccgga gctggaggag 300  
 gaggagcagc aacagccgca tcagccacag cttccatggg tcctgcagag gcagcgcccc 360  
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 ccggtggccg acctgggtaa cggattt 447

<210> 579  
 <211> 152  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-035-Q1-E1-A4  
 <400> 579

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 tgtggcggca ggcgtttgca caggcgatgc ag 152

<210> 580  
 <211> 419  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-035-Q1-E1-A5  
 <400> 580

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 tggcttgaaa ggtcctatgg ctacacctat tggcaagggt catcgatctt tgaatcttac 180  
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 catgaccaga tacgatgatg ttaaccttgt gacaattcgt gaaaatactg aacgagaata 300  
 tattggtctt gagcatcacg ttgtgacacg tgtttagaa agtttgaaaa ttactaccgc 360

ccaagcaagt ttgacagtgg cataatatgc ttttcattat gccaaaggcca atggccggg 419

<210> 581

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-A6

<400> 581

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tgacttgaaa gcaaatgagg atgatctcag gcgattcttc tctgatattg gtggtgccac 180

agcaataaga ttgctgaggg acagattcac caaaaaatca aggggggttg cctatgtgga 240

cttttttagac aacaagcatc ttgaggcagc tattaagaaa aacaagcaga agctgcttgg 300

aaagaaagtg agtatcgcgc gatcagatcc aagcaagggt aagaagagcc gtgaagcagg 360

tcaaacaatc caggataatt tacctccgag tgggtggtgat gatgcaaaag caacaggatc 420

cagtggacca gac 433

<210> 582

<211> 408

<212> DNA

<213> Zea mays

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<400> 582

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gtgtggataa cctgttcagc accggcaagg gaaaccttga cgggcagggc ccagccgtgt 180

ggagcaagaa ctctgcacc aataagtacg actgcaagat ccttcccaac tcgctggtga 240

tggacttcgt gaacaacggg gatgtgtccg gggtcacgct gctcaactcc aagttcttcc 300

acatgaacat gtaccggtgc aaggacatgc tgatcaagga cgtgaccgtg acggcgcccc 360

gggacagccc caacacggat ggcatccaca tgggcgactc atccggga 408

<210> 583  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-B1

<400> 583

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acacaatcca ccaatctgat tggattcggg ggaatgcttg ggcaaattcg aatttgctca 180
ggcattcgtt ccgattgcgg ctagctagct gatcgcttaa tcacccgacg cgggcaaatt 240
tgcacggcga cgacgatggg catcttgtgt tgtttccagt cccacaccag cgatcacgct 300
gttgcttcgt ccccggtac ctcttcgtcc tctgccccct cgtcgtgccg aaacaacgat 360
cgccgttgct cccc 374
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<210> 584  
 <211> 404  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-B10

<400> 584

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tttacactca aggagggccc gactggaatc tggaccctcc agagcaacga cctactcaag 300
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catccccgcc gatttcaagg ctggcaccac ctattggacc acac 404
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<210> 585  
 <211> 421  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-B12

<400> 585

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agatctttgt cccctacaga ggattcttca accggaatgg ggtggaagta tccgaggtag 180  
tattggaaga ggcagacgtg tccaaagcca ttctagggtta catcactgca aacaagatcc 240  
agagcattgc gctcggcgga gccagcagaa atgcgttcac caagaaattc aagaacgcgg 300  
acgtgccgtc gaccctgatg aagtgcgctc cagactactg caacatctac gtcgtggcca 360  
agggcaagtc cgtcaatgtc aggtcgcga agtgccggcgt cccgccgatg cacactggcg 420  
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<210> 586

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-B4

<400> 586

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aaaatgtggc gacctataca caaaacactg aaaactgggt acagttctcg cattctctgt 180  
tttagttgag tttgcaggta gtagagacga catgactcag tcaaccgctt gttctttgac 240  
aacgacggct gctgcagcaa gtgggccatt gttagcgtca agcttcaggg agacatcctt 300  
gaacatcttg cggctgaggg tgttgtaaac cgctctcgag tactgccgcg acgtgttcct 360  
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<210> 587

<211> 452

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-B5

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 ggggtgggggg ggggggtgggg ggggatggggg ggggccggggg ggggggggggg ggggggggcgg 240  
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 ggggggggggg ggggggggggg gggggggctgg ggggtgggggg ggggggggggg ggggggggggg 360  
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<210> 588  
 <211> 419  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-035-Q1-E1-B7  
 <400> 588

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 tgctgatgct ccggcgacgg cgggcgcgcc ggcgtcgtcc gggccctcta gcgcacccgc 180  
 gccatcgtcg tctgagtcct ccggcgacac agggccgtcg tcgtctgatg ggtcctccgg 240  
 cgccccggcg ccatcgtcgt ctgatgggtc ctccagcgcc ccggcgccat cgtccggcga 300  
 cgacggatca gcttgagcgt gagcgatgac gcggagtttg ggtcatttcg tgcctactca 360  
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 <213> Zea mays  
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gctcgagca gccgcctgcg tcggacgggc cgcgttggtc gccttcggcg cctcgctctg 240  
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 gacgatgtat agtttcgtcg actgcttcat acacatatat agcagcccaa ttaatgtaac 180  
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<223> Clone ID: LIB148-035-Q1-E1-C4

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gaagagcgac gtctacagtt tcggtgtgat ccttctggag ctactcaccg ggcggaagcc 180  
agtcgaccac accatgccga aaggccagca aagccttggt acctgggcca ctccaaggtt 240  
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ggcggttgca aagctggcgg cggttgcagc gctgtgcggt cagtacgagt ccgacttccg 360  
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<210> 593

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-C5

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gtcgccgcgg gagcggccgt ttgctgcgca gggccggcct cgctgtcttc tagcaggaag 180  
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cacgacgtga tcatgctgag gcggacgagg agcggggcgg cattcccgcc gccgatctcc 300  
gtgatcgga agggcgggcg gccgtggctc tgccctgcgg cgacaccgca ggggtggacg 360  
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<210> 594

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-C7

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acgccggcca cgccaagccc ctgacgcctg gcggggcgct ggtacaccac aaccacggca 180  
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 ccggcaccac ggcggggcgcg tgcgggtaca aggacacgcg cgcgcagggg tatggcgtgc 300  
 agacggtggc cgtgagcacg gtgctgttcg gcgacggcgc ggcctgcggc ggggtgctacg 360  
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 <212> DNA  
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<223> Clone ID: LIB148-035-Q1-E1-C8

<400> 595

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 ctacacgctc accatccgcg acaacttcac caccttcacg ggcaaggcaa gccagcagat 240  
 ccatgaccgg acgggcacgc acggcaagct gcacacttca tcacagtcag cgtgctactg 300  
 aacctgatcc ctactgccca tctgagagat caagtgcgca gacagggtcca agctca 356

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<223> Clone ID: LIB148-035-Q1-E1-D1

<400> 596

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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-D2

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ccgcgccaaag ccgagagaaa gatggagatg atcaagagga tcgctcatcg ccgcgctcct 180  
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cgcagcc 247

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<223> Clone ID: LIB148-035-Q1-E1-D5

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tcctgcagga ggccgacgag aaagccagcg agatcagtgt tgccgccgag gaggagttca 180  
gcatcgagaa gctgcagctg gtggagtcgg aaaaacggag ggtgcggcag gactacgagc 240  
gcaaggagaa gcaggtggac gtccgcagga agatcgagta ctgcacggag ctgaacgcgg 300  
cgcgcatcaa gctgctgcgg gcgcaggacg acgtggtgac cgggatgaag gagagcgccg 360  
gcgacgcgct gctccgcgtc accaaggacg ccaacgccta c 401

<210> 599  
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tcaatcaagc ccagacatat atagaatgag aacgggcaat ggattacctg cgttgaggca 180  
cccaatagta gatggaagta tagagaacga ctccgcatcg ggagatttcg ctgagcactc 240  
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<210> 600  
<211> 409  
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ggaggccgcg ctccggcgccg gaatcgccgc cgccttcgcc gctggactcg tcggtgtcta 180  
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aggttattgc gctgtgtaca tcttcatgca gaccttcctg atcccaggga caatattcat 360  
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<211> 387  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-E1

<400> 601

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<210> 602  
 <211> 396  
 <212> DNA  
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<223> Clone ID: LIB148-035-Q1-E1-E10

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tgaaccagca gagctacgcg ctgtacgcgc agaagtccgt cggggacggg ggcaaggagc 240
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<223> Clone ID: LIB148-035-Q1-E1-E3

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gcaaccaatt ttataggtca attcttttat ttgtataaaa aaaaaaaaaa aaaaaataaa 180
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aag 243
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<210> 604  
 <211> 418  
 <212> DNA  
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<223> Clone ID: LIB148-035-Q1-E1-E5

<400> 604

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 tcgggatggg gcctgggacg tggtcgcccg agatgaggaa gacgtacaac ctactggaca 240  
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<210> 605  
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 <223> Clone ID: LIB148-035-Q1-E1-E7  
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 gccctagcgc aagcggcgcc gccgcgcgcg ccgtgccgcg cgcggggcg ctcgtcgctt 300  
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<223> Clone ID: LIB148-035-Q1-E1-F10

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 caagacaagt ttatgtgacg caatacacgc tgctcgtaag gatacaaggc ctacatcgca 180  
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<400> 608

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<223> Clone ID: LIB148-035-Q1-E1-F3

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<213> Zea mays

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<210> 611

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-G1

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<223> Clone ID: LIB148-035-Q1-E1-G11

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-G12

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<210> 615

<211> 394

<212> DNA

<213> Zea mays

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aagaacgccg aggaggccgg gaaggagaag ctggcgcagc aacgctgac gactgtccgt 240  
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<210> 619  
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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-A4

<400> 619

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agggccacca cctgagctct gccgccatag tcggccacga cggcgccggt tggggccaga 180  
gcaccgcatt cccacagttc aagccacagg agatgaccaa catcattaag gacttcgacg 240  
agcctggggtt tctggccccg atctgcctct tccttggccc caccaa 286

<210> 620  
<211> 57  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-A6

<400> 620

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<210> 621  
<211> 292  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-A8

<400> 621

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ccgccccgcc acatgacgga gtcagagggc gagacggagg ctgcgcgcgc ggccgtgctg 120  
acgcgcgcgc tgtcgtctggg gggcgggggg ctgcgggggg agctccgccc ggccaacctc 180  
ggccaacggg tgctcagcct cttccgcaac gtccgcccgg gctccgacct ctcccacttc 240  
cagctgcccg cgacgttcaa cctgcccaag tcgcagctgc agctgtacgg cg 292

<210> 622  
<211> 356  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B10

<400> 622

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gagcgcaggc cgacgaaccg gtacatcagc tacgcagcgc tgcgcgcgga ccaggtgccg 180  
tgcaacaaac gcggacggtc ctactacacc aactgcgcgg cgcaaacggc cgccaacccc 240  
taccgcgcgc gctgctccgc catcacacgc tgcgcccgca ggatgaactg agcgccatgg 300  
cggccgcctg cgggtctgatc tgcctgctgg ctggatgggc atggggcacg cagctg 356

<210> 623  
<211> 382  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B11

<400> 623

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gtcatgtcct tcaaccagtg cggcggcaac gtcggcgatt cagtcacat accacttccg 180  
ggatgggtct tggaggagat ggacaaggac caggacctgg cctacaccga ccggagtggc 240  
cgccggaact acgagtacgt ctccctgggc tgcgacgcga tgcccgtgct caagggccgc 300  
acccccatcc agtgctacgc cgacttcatg cgcgccttcc gcgaccactt cgccaccttc 360  
atgggcaaca ccatcgtgga ga 382

<210> 624  
 <211> 411  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-029-Q1-E1-B12

<400> 624

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acgggtacat ggagctcatg gagatggcca ggaagaccgg gctcaaggtc caggccgtca 120
tgtccttcca ccagtgcggc ggcaacgtcg gcgattcagt caccatacca cttccgggat 180
gggtcttggg ggagatggac aaggaccagg acctggccta caccgaccgg agtggccgcc 240
ggaactacga gtacgtctcc ctgggctgcg acgcgatgcc cgtgctcaag ggccgcaccc 300
ccatccagtg ctacgccgac ttcattgcgcg cttcccgga ccacttcgcc accttcattg 360
gcaacacccat cgtggagatc caggtcggca tgggccctgc cggcgagctg c 411
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<210> 625  
 <211> 278  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B2

<400> 625

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gacgtcattg acatcgaca tgccgcgatc tccattgtgg agagcagtgg cggcggcggc 120
gacggcagcg cggggagcga cgaggcgga tcgtccatgt tccagaggtt ctgggactcc 180
gccatggcct tggggccctt ggacgacgag acggacaccc agtcccagat gagcgaggcg 240
tcgaggtcgc agatgatgat gtccgatgtc caccacca 278
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<210> 626  
 <211> 282  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B3

<400> 626

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cggtgggtcgt cggcgttgtc gccaccgtca cccactccgg caagaaggcc ggcgacgact 120  
tcaccgtccc gggggaagcc tccattgcca cgtccggcaa gtcggtcgag tccctgtgcg 180  
cgcccacgtt gtacaaggag tcgtgtgaga agacgtctc ccaggccacc aatggcaccg 240  
agaaccccaa ggaggtgttc cacagcgttg ccaacgtggc gc 282

<210> 627

<211> 276

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B4

<400> 627

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acggattggt acgcctcttg aaagtctcgc tgggtccgggg tatcaacctt gcctaccgcg 120  
acgcaagagg cagcgatccg tatgtcgtcc tacggcttgg caagaagaaa ctgaatacaa 180  
gcgtgaagaa gagatccgtg aaccccatat ggcaagagga gctaactctg accgtcacag 240  
atcccatcca accactgaat ctggaggtgt tcgaca 276

<210> 628

<211> 290

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B5

<400> 628

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gtgcacgtcc tcaaggcgta gcacgggctg tccgaacgtg aggccccagg cccgtccgct 120  
cctaggcagg ccgtcgccgc gccggaggct gcagacggcc ttggccgcga cgggcaagac 180  
gccgggagag gcggaggagc aggtccccgc gtgggccaag cccggcgcgg acgagccgcc 240  
accctgggag cgcgagggcg gggccgcgcg tggacaggag gcccggcagg 290

<210> 629



<211> 291  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B6

<400> 629

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cggtgaccaa gagtcgcgct acatcaacac agccgatgcc cacgtcaaaa accggtcgct 120  
acctctctcg acattgatcg agatgctgaa ggataagact gggaaggact acattgatgt 180  
agggtcaatc cggctaacgc tttttaacct cttcaaagac gatgccagcc cgaagataaa 240  
gaagttcatg aagggtcatgc tgaacaagtt acagcatggg cagcacggag g 291

<210> 630  
<211> 307  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B7

<400> 630

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ataaggaagg catatgcaaa agcagccatg gcgaactcgt cgtccggcct tgcagtgaac 120  
gatcagtgca aggtgaactt ccgggagctg acgtcgcggc ggagcttctg gttcatcatg 180  
tgcaggatcg actacacaga catggagatc aagggtggacc tcctcggcgg accgaaccag 240  
tgctacggcc acttcaccga cagcctccc gccaagaat gccgctacac gatctacgac 300  
ctcgact 307

<210> 631  
<211> 412  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-029-Q1-E1-B9

<400> 631

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gacgcttgcg cagcgcaagc cgaccaaccg gtacatcagc tacgcgggcg tgcgcgcgga 180  
ccaggtgccg tgcaacaagc gcggccgggtc ctactacacc aactgcgcgg cgagacggc 240  
cgccaacccc taccgccgcg gctgctccgc catcacgcgc tgcgcccgcg gcatgaactg 300  
agcgccaagg cggcgggccgg cggctctgac tgcttctggg ctggctgggg anggggcacg 360  
cagctggcct ggctcgatcg cacaccatgc attgacgtcg tcgccggggg gg 412

<210> 632  
<211> 278  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-C1

<400> 632

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gtcctcttct gcatcgtgca tgggtgagaag gaagagtcaa agggcatcga tgcgaaagcg 120  
tccgggcctg gtgggtcctt cgacatcacc aagttgggcg cctccggcaa tggcaagaca 180  
gacagcacga aggtctgtgca ggaggcatgg gcatcggcgt gcggcggcac tgggaagcag 240  
acaatcctca tacccaaggg tgacttcctt gtccggaca 278

<210> 633  
<211> 391  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-C10

<400> 633

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aacatggctg cgtgataaca tgcatttatc tgaccaaaca aaggtgacgg cggcaagcaa 120  
gcacacgcag ataaaaaaat ggggcgcccg ccctaaaggt tcaaagctaa ggtacccttc 180  
aatgcaactt caaacccctt caacagggtc cccaaattcc aattcaaggg cttctgtata 240  
aaacattctc aaagggaata cccttggtt taccaaacta aagccccttg aaaaaaacc 300  
cccttcccca aacgggataa aaaccaaaga ggcccgaacc tttggccatt caaaaaattt 360  
gccaccccaa aaaggaaaat ggaaccccc c 391

<210> 634  
 <211> 404  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-C12

<400> 634

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ctcaacggcg tccccgccgg ccggcctcgg ccaaccccgg gctgcctgca agggcttctg  120
atggccctcg acgccgtcct ttcctccaat tgcccagctt tattgcagat ccagccctct  180
gatcctcgtc ttctttcacc tctccaacat gaaggccaac accaagatca agctggagcc  240
ggtcattggc cgcgcgtcgt ccctgccgcg gagcgccagc gagctaccgc acccgccgtc  300
accgttcagc tccaacacgg cgcaccaccc cgtctccgtg cccaccacac ctaggttgtc  360
cttatcgtgc tcgtcgttcg gccacatggg gaccccgccc accg                               404
  
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<210> 635  
 <211> 278  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-C2

<400> 635

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ggggagggct cagaaacctt tcatccaata catacatcta tctgagccct tccccgcggt  120
gaggcccgac cggagtcacac acacacacgg tgtctatggc ggccgtaata aggagccgcc  180
gccgcgtgtc cgtttttctt tacgtcgtcc tcgccgcagc tgcagctgca gccgcggcgc  240
aggcatccaa taacgtcacc tccgacgagg agtactgg                               278
  
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<210> 636  
 <211> 125  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-C3

<400> 636

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cagaagctat tgtattgttt gggtcgtttg tcagctaatt gaaatgcgat ggacatttac 120  
tagta 125

<210> 637  
<211> 266  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-029-Q1-E1-C4  
<400> 637

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agagcaccct ctatgtctgt gcaggaagag caaagttcct caaacacgtc atatgaggaa 120  
acggaatctg tgttggtgaa gctgatcgca cgtcagatca cacttttgct gtcattccatt 180  
tgggctcaat caacatcccc tgaaaatact cctgtgaact atgaagccat tgctcatact 240  
tacagtttgc atctgttggt ctctgg 266

<210> 638  
<211> 289  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-029-Q1-E1-C5  
<400> 638

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ggggaaggac gagaggttcc cgggtgtggga ggccgcgctc ggccgcggaa tcgccgccgc 120  
cttcgccgct ggactcgtcg gtgtctacct ttccatgccg gactccgact acagcttcct 180  
caagttgcca cgtaatctcg aggaactcca aatcctcact ggccaccttg agaactatac 240  
tagtgactac accctacagg tgttggtagg ttattgcgct gtgtacatc 289

<210> 639  
<211> 290  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-029-Q1-E1-C7

<400> 639

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aaacacaatc atctcatccg cccgtctcaa cgccacccta gccctgtgat atacaatggc 120  
ggcccagagc acgaggatgg tggcgctggc cctgggtggc ctctgtgtgg tggcgacggc 180  
gttgggtgcc acggccaccg cgtacggctg ctacgacgac tgctacgagc ggtgcgccaa 240  
cggcaagaag gacgaccccg cctgcaccaa gatgtgcaac caggcgtgcg 290

<210> 640

<211> 269

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-C8

<400> 640

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caaagcagaa ggtcgtcagc agccagccca tggccagcgc cgctcctgac gagcttccgc 120  
tggcggccaa gagttccacc acctccgacg cgtacgcata tccaaggcag cagcaggctc 180  
ccagcagcca gcccatgtct ggtggcgctc ccgacgagct tccaccggtg gccaagacct 240  
ctgccacgcc cgaaccgtac gcatctctg 269

<210> 641

<211> 279

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-D1

<400> 641

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caggcacggc gttcggcgcc atggccaaga acggcgagga ggagaagctg cgcaaggcgg 120  
gcatcatcga catgcagttc cgaagggtta agtgcaagta cgactccaag gtcaccttcc 180  
accttgaaaa ggggtgcggc cccaactacc tggcactggt ggtcaagtac gtcgacggcg 240  
acggtgacat tgtggcagtg gacgtcaagg agaagggtc 279

<210> 642  
 <211> 379  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-D11

<400> 642

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ccacgcgtcc gctcacgcgt ccgccacgc gtccgccac gcgtccgcgt gaagcagctg 60
gacaggaacg ggttccatgg caaccgcgag ttctctgtgg aggtgctgat gctcagcctc 120
ctgcaccacg cgaacctcgt caagctgctg ggctacagca ccgactccaa ccagcggatc 180
ctggtgtacg agtacatgcc caggggctcg ctggaggacc acctcctgga cctgcccccg 240
agctggaagc ccctgccgtg gcacacgcgg atgcgggtcg cggtagggcg gccgaatggc 300
atcgagtacc tgcaagaggt ggccaaccgc ccggtgatct accgcgacct caatgcgttc 360
aacatcctcc ttgacaagg 379
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<210> 643  
 <211> 269  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-D12

<400> 643

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gcggcgagct tgtaaacgac cggcttgccg ccgatggctg gatgcttcgc gttcgcgtcg 120
tcgatcgca gttgcgcgcc gttctgcagg tccttgccga tccgcgcgga cgggccggtg 180
agcggcgcg cgagaccgat caggatcgtc tgccggcgcg attgcgcgaa cgcgggaacg 240
gatcggcca gggcggccgc tctagagga 269
```

<210> 644  
 <211> 279  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-D3

<400> 644

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cccgcgcgcg tgccgtacgt gccagggacg acgccgggcg gccgatggag ttcacgtcgt 120  
cctacttcca cgccttcggc aaccccgacc tcgcggcggt ggtctccggc gacggcggca 180  
gcgcgcaggc ccaccggccg cgccgctcca ccgacggcgc gaaggcggag gacggcagga 240  
gccccaccac cacaacggcg aggcgcgcgc cgtccatgt 279

<210> 645  
<211> 254  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-D4

<400> 645

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aaggctcgcca agggttcagt tcgtggtacc aacaggcgat aaactaaagc gataagggcg 180  
tagagatccc atacgacata ttcgtcaccg tctccgttgc tctgcagctc ggatcagtca 240  
acctcagcca tatt 254

<210> 646  
<211> 291  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-029-Q1-E1-D5

<400> 646

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aaccgggaat ttttaagaag caataaatta aaaggctttt canaatggag gatgtgagca 120  
tgggcatgtg ggtagagcgg ttcaacaaca ccagacttgt taaatatgtc cacagcatca 180  
aattttgtca atttgatgc atagatgatt attacactgc aactaccaa tcaccaatgc 240  
agatgttgtg tttgtgggac aaactgcagg ctggaaaagc ccaatgctgc a 291

<210> 647

<211> 262  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-029-Q1-E1-D6  
  
 <400> 647  
  
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 ggccaaggca acggcggttt gaaggcgtt gccgatgccg gcgcggcg caatccaacc 180  
 ccaaccaagg aacgccaacc aaacctggcc gctgggaaaa caacaacccc tcctcaaggc 240  
 ggcggttact caacccaac ca 262

<210> 648  
 <211> 289  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-029-Q1-E1-D7  
  
 <400> 648  
  
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 gggattattt gtgaggagat attggagtta ttatatatat atatatatag gtagacgata 180  
 gatagacagc tagatctata taaccatggt ggatgggttc cgatggatca gaccgggctc 240  
 ttctgtcctg tacttgggtct tcttcttctt gtcgcagcc ctgtcggag 289

<210> 649  
 <211> 306  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-D8  
  
 <400> 649  
  
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 tcagggcacg cctcaagaac ggcacctcgt atctggggtt aacgatccag gccagaagc 120



agtcggagct ccctgagcag gtcctctgct gcgtcagggt gaacaagatc gatttcactg 180  
 accaagaagt tccaacaata gtcaccgttg atgacacctg acgcatttga tcaaaatggg 240  
 catcagacgt gcgagctatt attaactgct gcaaggctag atccatggga ttcagaggcg 300  
 acacag 306

<210> 650  
 <211> 279  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-029-Q1-E1-E1  
 <400> 650

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 gtctctttct gcatcgtgca tggtgagaag gaagagtcaa agggcatcga tgcgaaagcg 120  
 tccggggcctg gtgggtcctt cgacatcacc aagttgggcg cctccggcaa tggcaagaca 180  
 gacagcacga aggctgtgca ggaggcatgg gcatcggcgt gcggcgccac tgggaagcag 240  
 acaatcctca taccgaaggg tgacttcctt gtcggacaa 279

<210> 651  
 <211> 417  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-029-Q1-E1-E10  
 <400> 651

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 ctagtgactg cagcaggtgc gtgtcagaat gtcgcgtcct ctaatcagat atgaatctgg 180  
 ctgagacaga ctccgagtcg ccggcacatg cgccggcgcc agggccgctg tccggttgaa 240  
 ctgagaatcg tgcgtccagc catgcaagggt ggtcagaatg tacaactaat tagtgggtca 300  
 atcatgtgtc aggctaatag tgctcttgcc ataattatat agatatacgc acagtgtgtg 360  
 ctaagctacc cacatgcatt ctattgcagg gcgccgcaga tatattaaac aactgtg 417

<210> 652  
 <211> 395  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-E11  
  
 <400> 652  
  
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 caccggcgagg ctggccggca agttctacgt ggtgattgac cccagcgacg acgccgccga 180  
 cctcgtcacc cccaggaagg gcacgctccg gcacgccgtg acccgggccc gggcgctgtg 240  
 gatcaccttc gcgcgcgaca tggatgatcga gctctgccag gagctcatcg tgagcagcga 300  
 caagaccatc gacggggcgcg gagcgcaggt gcacatcgtg ggcgcgcaga tcacgctgca 360  
 gaacgtgcgc aacgtgatcc tccacaacct gcacg 395

<210> 653  
 <211> 297  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-E3  
  
 <400> 653  
  
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 atcgcccgcg ctcttgggtg tagccctcgc gctagtggcg gccaccgccc cacaggtagc 180  
 ggaggcaaag aagaagagag cggcggagag cggcgaggcg gcggaggcga agaagatcca 240  
 ggacgacttc tgctcgacgc tgtgcgaggg caagaagggg acggacctgg tcgtgtg 297

<210> 654  
 <211> 279  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-E4  
  
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ctccgccgcc gccctctctg ggattccgcg cgacaaagtc aggcgtagag gctccaggag 120  
gaggagggag gcgcagcagg gcgggtgggg gagatgttcc tctgggactg gttctacggg 180  
gtgctggcct ccctcggcct gtggcagaag gaggccaaga tcctcttcct tggcctcgac 240  
aacgccggca agaccacgct gctccacatg ctcaaggac 279

<210> 655  
<211> 304  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-029-Q1-E1-E5

<400> 655

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ccggccggggc atgacgatga cacggacgat gtgcctaggc ctgctgcttc tactactggc 180  
ggcggcgctcg acagcgacgg cgcatttcac ggtcggcgat gtggatgagt acgtgtccaa 240  
gcgcacgcag gagtcccgcc acaggaacaa cgggtggcgcg ggcacgatg acctcatctc 300  
cagt 304

<210> 656  
<211> 278  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-E7

<400> 656

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ccggcagccc gtcgcacgag ggcgggcgta ggccctcggc acgagcgcggt ctgcacgagc 180  
atggccggcg cgggggacag gccggcgcggt cccccggcg tccaagcggc cctgcgggcg 240  
tgcgggcagc accggcggtgc ggccctcgga ccctttgg 278

<210> 657

<211> 411  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-E9  
  
 <400> 657  
  
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 gcttgggggag ctattgaagg aggctggccg ggtgcgaagc agaaaggcaa agtccttgga 180  
 gaatctgtct gagaccaacc catatatcgc caccaagaga aatgcagttg ctgcatgaat 240  
 cactgttctg aagatgaaag gcgaggattg ttactaaggt attcaattgg ttcgttcaga 300  
 tgggggtaac gggaatattg gtgcttacct attaagaaaa tatgaaatga tcaaataact 360  
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<210> 658  
 <211> 279  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-F1  
  
 <400> 658  
  
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 tcgccaagaa gagcgacgac gtcgtgaacg ggcccctcct gaccgagaag atccaggcga 180  
 agaagacgct gatcgtgggg ccggacgagg agttcaagac cgtgcagtcc gccatcgacg 240  
 cgggtgcccgc cggcaacgcc gagtgggtca tcgtccacc 279

<210> 659  
 <211> 401  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-F10  
  
 <400> 659  
  
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cgacatgaag tactgcccc acaagttgtg tactgccaac ggcgcctcca aggtcaccgt 120  
caaggatgtc accttcaaga acatcaccgg cacctcctcc accccggagg ccgttagcct 180  
gctctgcact gccaaagtcc catgcaccgg cgtcaccatg gatgacgtca acgtcgagta 240  
tagcggcacc aacaacaaga ccatggctat atgcacgaac gccaaaggga gcaccaaggg 300  
ttgcctcaag gagcttgcac gcttctagac cctccatcga ctgacccatc tctctagtta 360  
taatTTTTTct ctcgctcttg cattgcccac tagatgctat c 401

<210> 660

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-F11

<400> 660

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accaccacct ccagtgaagt ctctccgcc accagcacca gttagctccc caccaccccc 120  
aataaaatct cctcctccac cggcaccagt tagctctcct ccaccagcac cagtgaagcc 180  
accatcacta ccaccaccgg cccagtaag ctacctcct ccagttgtca cccctgcccc 240  
gccgaagaaa gaagagcagt cattaccacc accagcagaa tcccaacccc caccatcatt 300  
caatgacatc atccttccac ctatcatggc caacaagtac gcctctccgc ctccccctca 360  
gttccaaggg tattaagcgc cacagagaca tggttgatga agcatgaatg gg 412

<210> 661

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-F12

<400> 661

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caacgacgtg ccgttgcca tctgcgcctc actgctcaaa cacttggact ctgacaacga 120  
ccacgatcag taataccaca tcggcgatca cgatcgatat gtaagagcac gtcgtcaacg 180  
acggagcgca gtcgtcgag actggctggc actaaaccag atctcctctt cacgtgaatg 240

acacatctgt aactgagata ggaaaggaca acagcaatgt aactgcgtgg ctgtatcaaa 300  
 ttctgagtgc tggaatcatg ctattgtcac ccagtgttcg ttttatcata caagttgcag 360  
 cgcagctcaa gacggctaag gacctgttcg tttgtgt 397

<210> 662  
 <211> 277  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-029-Q1-E1-F2  
 <400> 662

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 agttactgga acttggaaga actaaaactt tttacacatg tatattattc ctgcgcattg 180  
 agactaaaat gaaaaaaaga acaatcggcc cataatttat agctttcaat atagaactac 240  
 atgatttggt gcaaaatatg tgattataat ttttgtt 277

<210> 663  
 <211> 278  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-029-Q1-E1-F4  
 <400> 663

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 tcgcgcagct gggcgccaag ggcgacggca agtcggacag caccocgatg atcctcaagg 180  
 cgtggaagaa cgcgtgcgag gcgacggggg tacagaagat cgtcatcccg ccgggcaact 240  
 acctgacggg cgggctggag ctgaagggcc cctgcaag 278

<210> 664  
 <211> 290  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-029-Q1-E1-F6

<400> 664

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ccttcggcca cgacgccgtc acgttttctt tcttggtggc gtgcgtggcc gccaccgtcg 120  
cgctcgcgtc gtccatgtgc tcggcgtgcg accgcaagcc aaaggcggcc accaacgcgg 180  
acccggctgg gacggcctcc tccatctccg gtggtagcgg cagccaggag gctggcgcgg 240  
aggaggcagc ggtagaggag gaggtggtga ggctgtcgcc ggagctggcg 290

<210> 665

<211> 290

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-029-Q1-E1-F8

<400> 665

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gcgtcgacgg cttcgtcgac gagaagctca aggccgacat gactccgtg ctgcgcaacg 120  
ccaccgagct cagcagcaac gcgctggcca tcaccaacag cctcggcggg atcctgaaga 180  
agatggacct cggcatgttc agcaaggact cgcgccgccg actgctgtcg tcggagcagg 240  
atgagaaggg ctggcccgtg tggatgcggt cgcgggagag gaagctgctg 290

<210> 666

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-F9

<400> 666

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ctggcaccga tcagctcacc gccatcagag cccaagtcac cgtcgtcacc tccaatggta 120  
gagaaaactt ctccaccacc ggcaacgggt agtcaccac cacctacgcc taagtcgtca 180  
cctccacctg ctctgtgag ctccaccact ccagtgggtga agtcttctcc accaccggca 240  
ccagtcagct caccaccacc gacacctaag ccattacctc cacctgctcc tgtgagctca 300  
ccacctccgg tggatgaagtc ttctccaccg ccgacaccag tcagctcacc accaccgaca 360

cctaagccat tgctccacc tgctcctgtg agtcaccac ct

402

<210> 667  
<211> 280  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G1

<400> 667

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gatggacgtg gtgaaggaca acgacatgtg gcagtgcctg aacgagtgcg ccggggagat 120  
cgaggaggcg ctggaccacc tggacgacac cgagggcggc ctcgacgacg gcaagctcca 180  
cgacgtgaag ctgttcctgg acacggcgga ggaggacacg tggtcctgcg acgtctgctg 240  
caagcacgcc ccatccacgc ccgtcaaaac cacgctgctc 280

<210> 668  
<211> 398  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G10

<400> 668

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ccgcgtccaa ggacagggag atgcaggtca ccgtcgctt caaccacttc ggcaaggggc 120  
tggtgcagcg gatgccgcgc tgccgtcacg gcttcttcca cgtggtgaac aacgactaca 180  
cgcactggct catgtacgcc atcggcgga gccggaaccc caccatcatc agccagggca 240  
accgcttccg cgccgtcgac gacagcaggt tcaaggaggt gaccaagcgg gagtacacgc 300  
agtacagcga gtacaagaac tgggtgtgga agtcgcagga cgacctgttc ctcaacggcg 360  
ccttcttcaa ccagtccggc ggccagaacg agcgcaag 398

<210> 669  
<211> 354  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G11



<400> 669

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aatgacaggg acatgcatgt cagtctcgca ttcagcgact ttgagacggg gctgggtgcag 120  
cgggcgctgc gcagccgtga gcgcttcacg gacgtggtga acagcgacta cacgcactgg 180  
ctcaggtacg caataggagg taaacggcat cctaccatca tcagcgacgg caaccgcgtc 240  
cgcgtcgtca tcgacaatac gtgtaatgac gtgaggaagc tggagtacac gcagtatagc 300  
gagtatccga gctgggtgtg gaagtctcag gacgacctgt tcctcaacgg cgcc 354

<210> 670

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G12

<400> 670

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atcaacggcc acggcaccat cgacgggcag ggagccctgg tgtggagcaa gaaccagtgc 120  
cagcattctt acaattgcaa gatcctcccg aatagcttgg tgctggattt tgtgacgaac 180  
gtccagatcc gcggcatcac gctgctcaac agcaagttct tccacctcaa catcttcgag 240  
tgcaagaacg tgctgatcga caaagtgacg gtcaaggccc ccggcgacag cccaacacg 300  
gacggcatcc acatcggcga ctccagcaac gtgaccatca gcagcaccac catcggcgtc 360  
ggcgacgact gcatctccat cggccccggg agc 393

<210> 671

<211> 279

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G3

<400> 671

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atgaagtact ggtacgagct ggaccacgtc gtgccagcca acgaagtgac aacgctgctt 120  
gagaagcatg aggtgcggcg gatccccggg gtgggcctcc ttactcggga cctgggtccaa 180

ggcatcacc cctgtgttcc acgtctggtg cagaggatac cctccgtgca cgcggtcttc 240  
ctgttcatgt ccatcaagca cctgccgatc ccacacgtg 279

<210> 672  
<211> 278  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G4

<400> 672

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ctcgtctccg ccgcggccag cgcgcggacc gtgggagaca ccgtgcagga cgcgtgcagc 180  
aagaccaggt tccccaaagt ctgcgtggac agcctcgccg ccaagccgga gagccagaag 240  
gcgacgccgc gcaagctggc ggagctgttc gtgaacat 278

<210> 673  
<211> 271  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G5

<400> 673

atagtgagtc gtataaggcg tcatgacgtt catggacacc tgcgtcgacg gcttcgtcga 60  
cgagaagctc aaggccgaca tgcactccgt gctgcgcaac gccaccgggc tcagcagcaa 120  
cgcgctgggc atcagcaaca gcctcggcgg gatcctgaag aagatggacc tcggcatgtt 180  
cagcaaggac tcgcgccgcc gactgctgtc gtcggagcag gatgagaatg gctggccccgt 240  
gtggattcag tcgccggaga tgaagctgct g 271

<210> 674  
<211> 291  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G7

<400> 674

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gaacatgctg atcaaggacg tgaccgtgac ggcgcccggg gacagcccca acacggatgg 120  
catccacatg ggcgactcat ccgggatcac catcaccaac accgtcattg gcgtcggcga 180  
cgactgcata tccatcggcc ctgggacctc caacgtgaac atcactggcg tgacctgcgg 240  
ccccggccac ggcatacaga tcggcagcct aaggcgggtac aaggacgaga a 291

<210> 675  
<211> 372  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G9

<400> 675

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gccggcctcg ctgtcttcta gcaggaagca gcagcagcag cccgacgacg ccggctgcgg 180  
cagcagcgac gaccactacc agcacgacgt gatcatgctg aggcggacga ggagcggggc 240  
ggcgttcccc cgcgcgatct ccgtgatcgg caagggcggg cggccgtggc tctgcctgcg 300  
ggcgcaccgc gaggtgggac gcctcgtgct gcggcagatg cgctgccgt cgcaggagct 360  
gctgcagccc tg 372

<210> 676  
<211> 292  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-H1

<400> 676

ctccccgggtc gacccacgcg tccaggatgc atcgcatag gcgtgcggcg gcactgggaa 60  
gcagacaatc ctcatacca aggggtgactt ccttgtcgga caactcaact tcacaggccc 120  
ttgcaagggc gacgtgacca tccagggtga tggcaatctg ctggcgacca cggacctaag 180  
ccagtacaag gaccatggta attggatcga gattctacgt gtggataacc tggatcac 240  
cggcaagggg aaccttgacg ggcagggccc agccgtgtgg agcaagaact cc 292

<210> 677  
 <211> 416  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-C6

<400> 677

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cgacatccac agggggggagg ggaaaacacg tgcattcacc cggcggcaat aatggcctcg  120
gttcgggctc cggcgacgac gaccgccgcc gtaatcctat gcctatgcgt cgtcctctcc  180
tgtgccgagg ctgacgaccc caacctcccc gactacgtca tccagggccg cgtgtactgc  240
gacacctgcc gcgccggggt cgtgaccaac gtcaccgagt acatcgcggg cgccaagggtg  300
aggctggagt gcaggcactt cggcaccggc aagctcgagc gcgccatcga cggggtcacc  360
gacgcgaccg gcacctacac gatcgagctc aaggacagcc acgaggagga catctg   416
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<210> 678  
 <211> 399  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-C7

<400> 678

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acggacgagg cggagctgca ggccgccgtg gagcgcgcgg cgcgcctgct ggcgccttac  120
gacgcggcca tcgccgagta cagcagccag gcggacgcca ccaccatccc gggccactac  180
gtcgtgtact gggagctcat ggtgaggagg ggcggggcgt cgcccagcgc cgccgtcttc  240
gagcgtgct gcctggagat ggaggaggcc ctgaacgcgg tgtacaggca gggccgcaac  300
ggggacgcca tcaggccgct ggagatccgg gtggtgcgcg gcggcacgtt cgaggaggtg  360
atggactacg ccatctcgcg cggcgcctct atcaaccag   399
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<210> 679  
 <211> 410  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-C8

<400> 679

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agctctccga cttcggggctc gccaaagctgg gcccctatggg cgaccagagc cacgtcagca 180  
ccagggtcat gggcacgtac ggctactgcg ccccgagta cgccatgacc ggcaagctca 240  
ccaagatgtc ggacatctac agcttcggcg tcgtgctgct cgagctcatc accggccgcc 300  
gcgccatcga cgtcacgagg ccgtccgagg agcaggctcct cgttcactgg gcaacgcctc 360  
tgctgagaga caggcggagg ttcatgaagc tggccgaccc gttgctgggc 410

<210> 680

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D1

<400> 680

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ttctgctcgg gtcccggccg atccggcagc tctcatcag cacaaccggg ggcaacgtcc 120  
cccagcggat gctagcctga tcgggtcccc acggtcgatg ggttcgcccg ggtccgcca 180  
tggcagacgc ggcgagtacg tgaggatccc tgaggaggcg gaggtggcgt ccaaggggga 240  
ggcagatgcc gcggcgccca tcaaggcggc cgtggcagcg gaggccccga gggcgctgcg 300  
gtgccgcgcg atccggtggt gggccaaggc cgcctgtgctt gggatcttcc ttgcaggggc 360  
cggagctgct gccgtggtct tcctcgcccc gctcgttatt aagaaggctg ttgcacctat 420  
tctttactgg ga 432

<210> 681

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D10

<400> 681

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 aagagccagc cagagaaaact aataaaaactc tcaccgcccgc catccgagag aacaagccaa 120  
 ccgaccccgt cccaaggca atccgtcgcc gacgtaccac cgccaccgca ggagcgagat 180  
 ggagatgaag aggatcctct tcgcccgtcct cgtcgtcatc gccgcctcgg ccaccgcagt 240  
 gctggcctcc accgaggccg ccgcccgcggg cgccccaaact gcctccgagt cgtccgccga 300  
 ggctcccgtt ggcgctggcg ctggcgctgc cgctggcgcc gccgcccggg ggccctccgc 360  
 cagcagcggc gcgcccgcgc tcgcccgcgc gccgcccgcg ctctctttct ccctcctcgc 420  
 ctactacctc cactaagcgt gtgc 444

<210> 682  
 <211> 411  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D11

<400> 682

ccacgcgtcc aacctgtgt ccaactactc ggccgccatc acggatctgc actccatcgg 60  
 cgcgaggaag ttccgccatca tcaacgtggg gctgggtgggg tgcgtgccgg tgggtgcgggt 120  
 gctggacgcg gacggcgggt gcgcccaggg gctcaacaag ctgggtgaag ccttcgacgt 180  
 cgcgctgggg ccgctcctcg ccggcctcgc cgacaagctg ccgggggtga cctactcgct 240  
 ggccaactcc ttccgcctga cgcaggacgc cttcgcggac ccgaaggcgt cagggtagag 300  
 cgacgtggcc agcgcttgcg gcgggagcgg gcggctgctg gcggaggcgg actgcctgcc 360  
 caactccacc gtgtgcagcg accacgacag ccacgtgttc tgggaacgct a 411

<210> 683  
 <211> 285  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D12

<400> 683

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 caccacggct gggcagggca gctgctccac gtcacccgtg aggttcacag tgtggctcct 120

ctggtgactc gcggttctgct gggggctcgga gccatcatcg acgctgaccg cagatgccaa 180  
atcttctgct aacaccatga acgtgacaac gtgggcgctc cactcggatc atcacctctc 240  
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<210> 684

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D2

<400> 684

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accgccacat cagccatggg cgcttgcgca accaagccca agacgcttga ggggcaggcc 120  
ccagctgagg ccgccgtctc cacacccaag gttgcgccc aggccactcc aatctccgtt 180  
gaggttgcgg ctgatgaaca ggtagctgag aaggtggtag tggaggagcc ggctgcggcg 240  
gccgacgttg atcatcacia ggctaataag gtggtcgctc cacaggcgga cgtcgccgag 300  
cccgatcaca aggatgagga agccgtggag aacaccgtcg tcgacgacga gaatccagcg 360  
gcagccgcca atgcagagga aaaggtcgcc accgccgccg agaccacgac g 411

<210> 685

<211> 449

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D3

<400> 685

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taagagccag ccagagaaac taataaaact ctgccgccg ccatccgagc gaacaagcca 120  
accgaccccg tcccaaggc aatccgccg cgacgtacca ccaccacgc aggagcgaga 180  
tggagatgaa gaggatcctc ttgccgtcc tcgtcgtcat cgccgcctcg gccaccgcag 240  
tgctggcctc caccgaggcc gccgccgcg gcgcccacac tgcttccgag tcgtccgccg 300  
aggctccgc tggcgctggc gctggcgctg ccgctggcgc cgccgccgcg gggccctccg 360  
ccagcagcgg cgcgccgcg ctgccgccg cgccgccgc gctcctcttc tccctcctcg 420

cctactaact ccactaagcg tgtgcgtgc

449

<210> 686

<211> 426

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-022-Q1-E1-D4

<400> 686

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gaggaggacg ccgtggctgc gactgcgact ggcctgcgc cggcgtcggc gtcggcgctcc 120

tttgggctct tctccgggga gttcctccgc cggcacgggc tgcacctcct gggcacgtcc 180

tcgacgtggt tcttgctgga catcgcttc tactcgaga acctgttcca gaaggacatc 240

ttcagcgagg tgggggtgat cccaaggcg gcgacgatga acgcgctgga ggagctgttc 300

agcatcgcg cggcgagtc cctgatcgcg ctgtgaggca cggtgcccg ctactggttc 360

acggtggcgc tgatcgacgt gttggggcgg ttcgcatcc angtgacggg gttcctgatg 420

atgacg 426

<210> 687

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D5

<400> 687

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gattggtagg cctcttgaaa gttcgcgtgg tccggggtat caaccttgcc taccgcgacg 120

caagaggcag cgatccgtat gtcgtcctac ggcttgcaa gaagaaactg aagacaagcg 180

tgaagaagag atccgtgaac cccatatggc aagaggagct aactctgacc gtcacagatc 240

ccagccaacc actgaagctg gaggtgttcg acaaggacac cttcagcaga gacgacccca 300

tgggagacgc ggaggtggac gtggcgccac taatggaggc ggtgagcatg aaccgcggg 360

aggagagtct gaggaacggc gccatcatca ggtccgagcg gccgagcgcc aggaactgcc 420



<210> 688  
 <211> 403  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D6

<400> 688

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acttcacagg cccttgcaag ggcgacgtga ccatccacgt ggatggcaat ctgctggcga 120
ccacggacct aaccagtag aaggaccatg gtaattggat cgagattcta cgtgtggata 180
acctggtcat caccggcaac ggaaaccttg acgggcaggg cccagccgtg tggagcaaga 240
actcctgcat caagaagtag gactgcaaga tccttcccaa ctgctgggtg atggacttcg 300
tgaacaacgg ggaggtgtcc ggggtcacgc tgctcaactc caagttcttc cacatgaaca 360
tgtaccggtg caaggacatg ctgatcaacg acctgaccgt gac 403
```

<210> 689  
 <211> 423  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D7

<400> 689

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gatggagtgc acgtcgtcct acttcacgc cttcggcaac cccgacctcg cggcgggtgt 180
ctccggcgac ggcggcagcg cgcaggccca cgggccgcgc cgtccaccg acggcgcgaa 240
ggcggaggac ggcaggagcc ccaccaccac aacggcgagg cgcgcgccgt ccatgttctg 300
cgtccccgac acggaggcgg aggagcccaa cggcttcttg gacgagtga ccctctgccg 360
caaggcgctc tgcggcgaca tcttcatgta cagatgggac acgccattct gcagcgacga 420
ttg 423
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<210> 690

<211> 406  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-022-Q1-E1-D8  
  
 <400> 690  
  
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 ccagctcgcg aaaataatga agagccgcag catggcatca tcggccgcgc tcttggtgct 120  
 agccctcgcg ctagtggcgg ccaccgcccc acaggtagcg gaggcaaaga agaagagagc 180  
 ggcggagagc ggcgaggcgg cggaggcgaa gaagatccag gacgacttct gctcgacgct 240  
 gtgcgagggc aagaagggga cggacctgtt cgtgtgcaag gagtcctgcg cgctctccca 300  
 gcagtccaac ctggtgctgt acggcaggat ccagtgcagg ggcaagtgca ccgagcagaa 360  
 gggcatcacg gcgccggcca tgaaggtctg ccaggaggag tgcgac 406

<210> 691  
 <211> 406  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-022-Q1-E1-D9  
  
 <400> 691  
  
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 atcctagtca tccttggtgt cctcgccgtg gcttcaccgg cggctctggc cgccttcgat 120  
 gtgatagaga tgctggccga caagcccacg tactccacgt tcctgaagct cctgcaggac 180  
 accaaggctc cgggcgaggc gaatcagctc cggtcggcga cgctactggt cgtccccgac 240  
 aaacttgcca agcctctggc gtcgctgccc gccgataagg tgcggccggc ggtggagaac 300  
 cagtccttc tcagttactt tcgaccatc aagctggacg agatgaagac acgcaaacgc 360  
 atcctcccaa cgctgctctc cgtcacgaca agaaactcgg cgtcct 406

<210> 692  
 <211> 420  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-022-Q1-E1-E1

<400> 692

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tgtgagaatc atgtggctgt cgatgctggc acaggttgcg atggttgtgg cgttggtgtt 120  
cttggtgagc ggcacatggt gcggtcctcc caaagtctcc ccaggcaaga acatcacggt 180  
cacctatggc aaggactggc tggacgctaa agcgacatgg tatggcaagc cgacaggtgc 240  
cggtcacgat tacaacggtg gaggatgcgg gtacaatgac gtgaacaagc ccaccttcaa 300  
tatcatgggc acatgcggca acatccccat cttcaaagat ggactggggt gtgggtcctg 360  
cttcgagatc aagtgcgata accctgtgga gtgctccggc aagctcgtgg tgggtgcacat 420

<210> 693

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E10

<400> 693

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tggaagaac gaggtgacg acgacaagcg cgagctcgtc ttcaaggaag acgggcagga 120  
gtatgcgcat gtgaccgga tgctcggcaa cgggcggtgc gaggccacct gcgtggacgg 180  
cacgcgtcgc ctctgccata tccggggcaa gatgcacaag aaggtgtgga tcgcggccgg 240  
ggacatcgtc ctgctcgcc tccgcgacta ccaggacgac aaggccgacg tcctcctcaa 300  
gtacatgaac gacgaggcgc gcctgctcaa ggcctacggg gagcttccc agacgctcag 360  
gctcaacgat ggcgtcgacg tcgatgggcc cgaggacggc gaggagaacg gcgact 416

<210> 694

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E11

<400> 694

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catggctgtg ggccgctcc ttgcggcgct cgtcgccggc gggctcgtgc ggcccccgaa 120

ggtgccaccc ggccccaaca tcaccaccaa ctacaacggc aagtgggtca cgcctagggc 180  
 cacctggtac ggtcagccca acggtgccgg cgctcctgac aacggcggtg cgtgcgggat 240  
 caagaacgtg aacctgccac cctacagcgg catgacggcg tgcggcaacg tccccatctt 300  
 caaggacggc aagggctgcg gctcatgcta cgaggtgaga tgcaaggaaa aacctgagtg 360  
 ctcgggcaat ccagtcacgg tgtacatcac tgacatgaac tacgagccta tcg 413

<210> 695  
 <211> 440  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-022-Q1-E1-E12

<400> 695  
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 gtcacctcta ccgctaacga aatcatcacc tctccacca ccgtctatgg tcgccatccc 120  
 caccacaagc aactcacct cctccatcat ctctaataag ctcacctcct cctccgatgc 180  
 aatccccctc accgctgct ccagtcagct caccaccagt acctataaaa tcaccaccac 240  
 cggttccagt aagctcacca cctcctcttg gcgcaatccc ctccaccacc tgctccagtc 300  
 agctcactac caccacctgt aaaatcacct cctccagcgg ctccagttag ctcaccatcg 360  
 cctcctgtga aatactcttc accacctact ccagtcaact cactgccacc atctgtaaaa 420  
 ttacctctc cactagctcc 440

<210> 696  
 <211> 432  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E2

<400> 696  
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 tgatccgacc tcccctaagc catcgatgag tagagaaaaa cagtgaacgc cacctctgta 180  
 ctogccccac cttatggcgc gtcgctcctg cagtaccggc ccacgctctg cgcggcgctc 240

aggtgttacg gctgccctca aatccgtcgt cggaccattg gcactggggc aagcaaaagc 300  
acggacaggt gctcggcgtg ctgcaacggc ttccgatttg cccggctaga tggaagacgg 360  
ctggggagca tcttctctgg ggaacaccgc gtgtcatggg tgccttgccg aagttcaagg 420  
acggcgtgat tg 432

<210> 697  
<211> 422  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E3

<400> 697

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aactacgcgt cgttgtggtc gcccaagcgc ctcatgcagc gcgctgcccg cgctttccgc 180  
cgcagcaggt cgcgcgcccg cgtcaggacg gtcaaggacc tcgccgagga acgggcctca 240  
gtgctcgccg ccagcaacaa ggtctccgat gaagcggcgg cggctaccgc ggtgccgcct 300  
gcaggtgcca gtgccaagac ctccagcagc aacgatgccg gcgacggcgc catgggcagc 360  
gtgcaggacg agccgcggca gcagcgccac gatgactatc aacccgagat cgggtcccag 420  
aa 422

<210> 698  
<211> 443  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E4

<400> 698

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tcaaccatgg cgaactcggc gtcggggatg gccgtgagcg acgagtgcaa gctcaagttc 180  
caggagctca agtcgaagcg aagcttccgg ttcatcacgt tcaagatcaa cgagcagacg 240  
cagcaggtgg tgggtggacag gctggggcag cggggcgaca cctacgacga cttcaccggc 300

tccatgcccc agagcgagtg ccgctacgcc gtcttcgact tcgacttcac caccgacgag 360  
aactgccaga agagcaagat cttgttcac tcttggtccc cggacacctc gagggtcagg 420  
agcaagatgc tgtacgccag etc 443

<210> 699

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E5

<400> 699

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gcgggttgga ggccggtggc ggaggcggcg gcggcggtta ctccaccccg agcgaggcag 180  
cgccatccac gcctgccgct ggggagacga cgaccccttc gtcaggcggc ggttactcca 240  
cccctagcga ggcagcgcca tccacgcctg ccgctgagga gacgacgacg actccttcgt 300  
caggcggcgg gggttacggc ggtgcaaccg gcaaggcttc ctcaggcggc ggccggctgg 360  
accccgacgg cgaccagag gttgggctg 389

<210> 700

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E6

<400> 700

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gccgcaccac cgggtagccc aggcgcgcg cgcgcgccgt ccagctcgtc tgctgtcgtc 120  
cctccgtgat ggccgacgtc gacgtggacg ccaacaacga ggccgagcaa aggacgcgct 180  
cggagccggg gacctccatg tcgccgtcat cggaggccga cgacgacacg gccagcagta 240  
caccacaacga gtccccggcg cgcgccttcg cggggcacac gctcgaggag ccgcctcggc 300  
ggcgggcgcc gtccccggcg tcccgtcccg ttcggatgct ccagagcgtg tgccggtcgc 360  
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<210> 701  
 <211> 389  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-022-Q1-E1-E7  
  
 <400> 701

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tccggcgaga gcgtggcaat caatgtcagc cacaaggaga aggtgatgcy cttccgcatg 240
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cagctgcacg atgtgatggc cagcaggaac acgatatact tcgccatgga gtacgtctgg 360
ggcggcgagc tcttcggacg ggtcgcccg 389
  
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<210> 702  
 <211> 398  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-022-Q1-E1-E8  
  
 <400> 702

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atgccgccgt ctctacacc aaggttgctc ccgaagcgac tccaatctcc gttaatgttg 180
ctcgctgaag aacatgtacc tgagagtgtg ctagtggaag aacctgatgc ggctgccgat 240
gttgaacatc ataaagctaa agatgtggtc gctccacatg ctgccgtagc cgagcctcat 300
cacactgaag aagatgccgt ggagaagaac gtcgacaaag atgacaagcc agtagctccc 360
gcgaatgcag atcatcacgt cgctagcgcc gccgagac 398
  
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<210> 703  
 <211> 407  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E9

<400> 703

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cccctggatc accctattct tgtgatgtcc cgatgggtga agaggccata gacgccatct 180  
gcaagagcca cggaacacca ccagatgaga agattgccat caccaaagct attataaatg 240  
tatcgaatgg atccaagccc ccaactcttg ctggcatcat agcacttggt atgagcatcg 300  
caacgatggt ccgtctgacc cgcagcatga tgcttgggaa ggttctcggt gctgccatag 360  
gtggagctac cctctcagaa ggtaaataca aagtacaaga gcgccag 407

<210> 704

<211> 416

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-022-Q1-E1-F1

<400> 704

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atgttctacg cgccggtgct gttcctgacc atcggtctcg gcgacgacgc gtcgctgatg 180  
gcggccgtca tcacggggct ggtcaacatg ttcgccaccg tgggtgtccat cgtgtgcgtg 240  
gaccgcctgg gccggcgcg cgtgttctct cagggcggtg cgcagatgtt cgtctcccag 300  
atcgtggtgg gcacgctgat cgcgctccag ttcggcaccg ccggcgtggg cgagatgtcn 360  
cgctccaacg cctggctgct ggtgctcttc atctgcctct acgtcgccgg gttegc 416

<210> 705

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F10

<400> 705



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 aagcgctccgg gcccggtggg tccttcgaca tcaccaagtt gggcgctctt ggcaatggca 180  
 agacggatag cacgaaggct gtgcaggagg cgtgggcatc ggcgtgcggc ggcaccggga 240  
 agcagacgat cctcatcccc aagggcgact tcctcgtcgg accactcaac ttcacaggcc 300  
 catgcaaggg cgacgtgacc atccagggtg atggcaatct gctggcgacc acggacctaa 360  
 gccagtacaa ggatcatggt aattggatcg agattctacg cgtggacaac 410

<210> 706

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F11

<400> 706

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 cggtggatca agtgcacac acctttaggg agggcccttg gacagcagtt tgtgctgcaa 180  
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 ttcagaatgg cacaagttct agcagtgacc cagatcgtct tcccaacgag ttgggcagta 300  
 tgagcataac ggacgacaag gacgttgaag atattgtagt caatggcaat ggggcggagc 360  
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<210> 707

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F2

<400> 707

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 ggatgaagga cagcgacaaa ccgcttaagg gaccctcac cgtccgcctc actaccgagg 180

gaggcaccaa gtccgtctac gacgatgtca tccctgccaa ctggaatgcc aacaccgcct 240  
acaccgcaa ataattaact ttagtgctga caatacttta agccgaccta tgctacctat 300  
actagattgg gttggatccc aagcaatgca ttacacatgc atgcattgga ccgtgatatc 360  
tatttgctac cactacccta ttacgacagt gatgctggcg ccaacaatga tgggtgcatc 420  
ctcct 425

<210> 708  
<211> 439  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F3

<400> 708

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tgcgcgcggt atgcatcggc cgtgggcact acaccccagt caaccttcag ctacaaggag 180  
ggtgacccta ccgggcctac aaaatgggcc acattgcaga aggactggga tgtctgtgac 240  
agcggcaccg agcagtcctc gatcgacgtc gccaaagggtg aggtctctga ggatttagac 300  
ccgtgcagc agacctacga gcctggcgac gccgtcatgc acaaccggct ccacgatttc 360  
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aagcaggtgc actggcacg 439

<210> 709  
<211> 440  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F4

<400> 709

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catgcaataa gacaatggga tcaacgaaat aggtcttcag agtcccttcc acataatgtg 180  
tctgaagatg ctctttcttc ttttgatact tacgatgttg tttatggaga acaagatggt 240

ctaggcccaa aagcatttga tgtacatcca atatctatct tgcacaaacc aagaaaccat 300  
 atttctgata acattcagat atatcaacca aataaggagg cttcctcaga ggtctctgag 360  
 gagcattgca aggaagtcca gtgcatcgaa acaaatgagc ttaagaggag tccattattc 420  
 tttcctgttg atcgatatca 440

<210> 710

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F5

<400> 710

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 tggacggcgg tgatgatgac gttcgacaac gcgggcatgt ggagcatccg gtccaacatc 180  
 tgggagaggc agtacctcgg cgagcagctg tacgtgagcg tcattctcgcc ggagcgggtcg 240  
 ctcaggggagc agtacaacat gccggagact agcctccgct gcggcaaggt cgctggactg 300  
 ccaatgccgc cgtcctacct ctccgtctag agcatgcacg catctcgctc gggtttccct 360  
 tccttccatc acgtgcgcac ggtgctgtat acacaat 397

<210> 711

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F6

<400> 711

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 gctcatcttt gctgggaagc agcttgagga cgggcgcacg cttgccgact acaacatcca 180  
 gaaggagagc accctccact tgggtgctgcg cctcagggga ggcattgcaga tcttcgtgaa 240  
 gaccctgacc ggcaagacta tcaccctcga ggtggagtct tcagacacca tcgacaacgt 300  
 caaggccaag atccaggaca aggagggcatt tccccagac cagcagcggc tcattctttgc 360

tggaagcag cttgaggacg ggcgcacgct tgccgactac aacatccag

409

<210> 712

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F7

<400> 712

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ggactgcgcc attgtttccg tgaacaacat ggaggagatc atgacettgc ctgtggcacc 180

acctcaactt gacattcacg acaatccaat caagggtgcc ccatggaagg gaggtttctc 240

cttcaagaca tgtaccatca ccggggaagg gcaacatata ttctcggaa ggatgggcac 300

gccttccatc tactcctaca cccagattgc taaggagggt gtgcccataa tctacgacaa 360

agggaacatc ttcattgccc gtaatatgac tggtagacgc tgtgccactt 410

<210> 713

<211> 358

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F8

<400> 713

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aggcgatcac gattgtggtg gtgctggggc tcaccttcta caccttctgg tgctgccaat 180

aagggtacg agttcgaatt cctggggccg ttcttggtgt ctgtctgcct catccacatg 240

ctcttctagc accagcgtat catctgcgtg ctgggcaaga cccggaccat ggtgtaacgc 300

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F9

<400> 714

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ggaggcgtgg gcatcagcgt gcggcggcac cgggaagcag acgatcctca tccccaaggg 180  
cgacttcttc gtcggaccac tcaacttcac agggccatgc aagggcgacg tgaccatcca 240  
ggtgaatggc aatctgctgg cgaccacgga cctaagccag tacaaggatc atggtaattg 300  
gatcgagatt ctacgcgtgg acaaccttgt catcaccggc aagggaaagc tcgacgggca 360  
ggggccagcc gtgtggagca agaactcctg cgtcaagaag tacgactgca aga 413

<210> 715

<211> 364

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G1

<400> 715

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agcaacaagg tcaattgatc tagtttcaact cggacacgac taattcatcg ccatcgcaac 120  
cacttgtacg ggtattatgt atggaagaag agcgtgaata aaacactgac gaggatcagc 180  
tcgagtgttt cactgaacaa gccactactt gagcccagtg cctgagcctt gtcttcacaa 240  
gcagaggggtt atctcctggg ttgcaaactt tccatgactc caaggcgta ctagagtgcg 300  
caccagggct acctgggctg ggcgtgccgc agaggttggg cgacgacttg gtggccgaca 360  
gaga 364

<210> 716

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G10

<400> 716

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cgctgccgcc gcgccccaac aagccgctcg ccgcgccgag gttcggcgtg tgggacgagc 120  
agaacgccgc gatggcggcg cagggattca cgggtgcagtt cgagaaggtg aagcgccacc 180  
gggaggagggc caggaccgcc cccgcgccgc ccggtgcagcc gccgaagctg ctgtcgtcgc 240  
ccgaccacgc agcgcccgcca cgcgcgcggc gacacgggaa ggggaaggcc aagaggtcct 300  
tcatgtccag gatctacagg tgcctgttcc caagggtcag agagtgagtg atccgacgat 360  
ggttatacac aaccgctcag ccgtatacgg tgtactacgt gttcttcgac agagac 416

<210> 717  
<211> 420  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G11

<400> 717

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ggggacagcc agtccaacat ggtgacggcg catgggcgga cggaccccaa catgcccacg 180  
ggcatcgtgc tccagggctg ccgcacgtg cgggagcagg cgctcttccc cgaccgcctc 240  
cagatcgcca cctacctcgg ccggccgtgg aaggagtacg cgaggacggt ggtgatggag 300  
agcaccatcg gcgacctcat caggccggaa ggggtgggcg agtggatggg cgacctcggc 360  
ctcaagacgc tctactacgc cgagtacgcc aacaccggcc cgggcgccgg caccagcaag 420

<210> 718  
<211> 414  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G12

<400> 718

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acacctccag cagcggcggg ctgctggatc agtcgatgct gatcggcgac gaacacctgc 180  
tgcggcccaa cccgagtatg gtcaaggctc cctccatgcc cgcgctctcc taccgtgagc 240

cggatgggtc caggatgctg ccagcccatg ggcgcgggag cgacggcgac gtctcctcgc 300  
 tggggcactg ccttccggga caggacctcc accgtggacg aacacgaacg tgcgtacacg 360  
 cggcacaaac acgatgatca tcgtctcacc atgtggttgc atgcatcggg aaac 414

<210> 719

<211> 448

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G2

<400> 719

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 tcccattctg atcctgtgga cagtgggtta ataatagtaa taaaaatgat aatccacctc 120  
 ctctgcttcc caggcccagc agcaggagct cccccgtctc cgtcctcctc cgcctctgtc 180  
 aggggtcccgg tcggacttcc tcacgacgc cgcgccaaat cccgtctcgt tcttccgttc 240  
 cgctgcgcat cctcaggaat ggaacttggc gccaccactg ccctgtaccc tctgcaccgc 300  
 tgcaaaacca ttacctgggt caggcatgcc cagggcattc acaacgtcgc aggcgagaag 360  
 gacttcggcg cctacatgtc acatgaactg ttcgatgctc agtcaaccc tttgggttgg 420  
 aaccaagtcg atggtctgcg ggagcatg 448

<210> 720

<211> 429

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-022-Q1-E1-G3

<400> 720

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 gcaacaactc agccgccgca accgccacat cagccatggg cgcttgcgca accaagccca 120  
 agacgcttga ggggcaggcc ccatctgatg ccgccgtctc cacacccaag gttgcgcccc 180  
 agggcactcc aatctccgtt gaggttgcgg ctgatgaaca ggtagctgac aaggtggtgg 240  
 tggaggagcc ggctgcggcg gccgacgttg agcatcagaa ggctaagtga gtgctcgtctc 300  
 cagaggcggc cgtcgccgag cccgaccaca aggaggagga agccgtggag aagaccgtcg 360

tcgaggagga gaagccagcg gcagcagccc atgcagagga aaatgtcgcc ancgccgccg 420  
agaccacga 429

<210> 721  
<211> 437  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G4

<400> 721

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gacgctggcg cagcgggaagc cgaccaaccg gtacatcagc tacgcgggcg tgcgcgcgga 120  
ccaggtgccc tgcaacaagc gcggccgggtc ctactacagc aactgcgagg cgcagaaggc 180  
cgccaacccc taccgccgcg gctgtccgc catcacgcgc tgcgcccga acatgaactg 240  
agcccagcgc tagctgtgtc cggggcgcg cgctgtcgcc gagccggtcg gtctggtctg 300  
gtctggtctg cctgcctgcc aggtcacgca gcctgggtcc accgatcgca caccatacat 360  
tgacgtcgtc gtcgcgccg tacgtgccgt tggacgggtg aagaggcggg ggcgtacga 420  
cagtatatat atacaca 437

<210> 722  
<211> 423  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G5

<400> 722

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cgtgctagcg gtggccgccc atgtcgccaa cgccggccac gccaagcccc tgacgcctgg 120  
cgggcgcgtg gtacaccaca accacggcaa gttcacggcc gggccgtgga aaccgcacca 180  
cgcgaccttc tacggcgggc gggacgggtc cggcaccacg gcgggcgcgt gcgggtacaa 240  
ggacacgcgc gcgcaggggt atggcgtgca gacgggtggc gtgagcacgg tgctgttcgg 300  
tgacggcgcg gcctgcggcg ggtgctacga ggtgcgctgc gtggacagcc ctacggggtg 360  
caagcccagc gcggcgacac tgggtggtgac ggcgaccgac ctgtgcccgc ccaacgacca 420



gca

423

<210> 723  
<211> 425  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G6

<400> 723

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cagaaagaca tccacgtcct cggcagcgtc gacggctcca gcgacggcag cagccccgag 180  
tccgaaggcc gcgtcgtcta cgcgacatg aagctggctg atacggaatc cgatgcgccg 240  
gcgccggcgc cggcgccggg gccgtcgtcc ggttgaactg agaagcgtgc gtccagccaa 300  
gcaaggtggt caaaaccgag aactaattaa gggctcgatt gtgtgtccgg ctactactgt 360  
tcttgccata attatatata gatacgcaaa gtgtggccaa gcctaccac atgcatgcta 420  
ttgca 425

<210> 724  
<211> 399  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G8

<400> 724

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aatggcctcg gttccggctc cggcgacgac gaccgccgcc gtcatectat gcctatgcgt 180  
cgtcctctcc tgtgccgagg ctgacgacc gaacctcccc gactacgtca tccagggccg 240  
cgtgtactgc gacacctgcc gcgccgggtt cgtgaccaac gtcaccgagt acatcgcggg 300  
cgccaagggt aggctggagt gcaagcactt cggcaccggc aagctcgagc gccccatcga 360  
cggggtcacc gacgcgaacg gcacctacac gatcgagct 399

<210> 725  
 <211> 428  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-H9

<400> 725

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atgatgacga ggatccagac tcagctgtac acgagacggc tcaagaccga gaaggacaag 180
aaggttctca agagtcagac caaggccgtt aataaacata gcctggacaa agcaaagatt 240
ggtgaaggct gggatcatag cctgcagtcc aaggagcaga tggaaacggg gcagaagatg 300
aagcaggaag ctgctacaag gcggcaaagg gccttgtcat acgcattctc tcaacagtgg 360
aggaacagga acacctcttc tgcgcgagct gcgcatgggc ctgctcccat gtacatggga 420
cctggcaa 428
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<210> 726  
 <211> 404  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A1

<400> 726

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gcggcgctcg cgccggcctc gtggcctgtg ggatcgtgat ggggaccatg tccaacgcca 120
acaacctgat gcaggacctc aagacggggg acctgacgct gacctcgccg cacaccgtgt 180
tcacagcca ggccatcggc acggcgctcg ggtgcgtcgt caaccggtc atgttctggg 240
ccttctacag ggtggtgcag aacggcgaca ccgacgtctt cgacgcgcc tacgcccag 300
tgtaccgcag catcgccatg ctgagcgccg ggcaggacgg gataccaatg cacagcctct 360
ggctctgcaa gctcttcttc gcgctggcgc tcgctgctcaa cgtg 404
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<210> 727  
 <211> 438  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A2

<400> 727

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caagggaaac cttgacgggc agggcccagc cgtgtggagc aagaactcct gcaccaagaa 120  
gtacgactgc aagatccttc ccaactcgtt ggtgatggac ttcgtgaaca acggggaggt 180  
gtccgggggtc acgctgctca actccaagtt cttccacatg aacatgtacc ggtgcaagga 240  
catgctgata aaggacgtga ccgtgacggc gcccggggac agccccaaca cggatggcat 300  
ccacatgggc gactcatccg ggatcaccat caccaacacc gtcattggcg tcggcgacga 360  
ctgcatctcc atcggccccc ggacctcaa ggtgaacatc accggcgtga cctgtggccc 420  
tggccacggc atcagcat 438

<210> 728

<211> 391

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-A3

<400> 728

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gtttcaggga gctgtcctat tcttgtttct cctcctcgtc gcagcagagg tgggaaccat 180  
cgatgccaaa atgggagtag ccatgcccat gcatgccttg ataatggaga aagcgaaaca 240  
gcaggagacg gagaagaagg aggagaaaag cacggagaag gaagagagtc aatgcttata 300  
gccgagtctc cagttcgagg gcttctgctt caacagcgac agatgcgccg aggtgtgcat 360  
gaaggagagc tttcncggtg gcgagtgcaa g 391

<210> 729

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A4

<400> 729

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gggcatcgat gcgaaagcgt ccgggccttg tgggtccttc gacatcacca agttgggcgc 180  
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cggcggcact gggaagcaga caatcctcat acccaagggc gacttccttg tcggacaact 300  
caacttcaca ggcccttgca agggcgacgt gaccatccag gtggatggca atctgctggc 360  
gaccacggac ctaagccagt acaaggacca tggtaattgg atcgagattc tacgcgtgga 420  
taacctggtc atc 433

<210> 730

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A5

<400> 730

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agtcattga ctctgttctg gatgttgga ggaaggaagc tgagaactgt gactgcttgc 180  
aaggattcca agtatgccac tcccttggtg gtggactgg atctggtatg ggtacgctgt 240  
tgatctcaaa gatcaggga gagtaccctg accgcatgat gcttacattc tcagttttcc 300  
cctcaccgaa agtatctgat accgtgggtg agccatacaa tgccactctt tctgtccacc 360  
agttggtcga gaatgctgat gattgcatgg ttctcgataa cgaagccctc tatgacatct 420

<210> 731

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A6

<400> 731

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gtc gatg cgg gcac atgttg cgat ggctgt ggcgttggtg ttcttgggtga gcggcgcatg 120  
 gtgcgggtcct cccaaagtcc cccagggcaa gaacatcacg gccacctatg gcaaggactg 180  
 gttggacgct aaagcgacat ggtatggcaa gccgacgggt gccgggtccc acgacaacgg 240  
 tggcgggtgc ggggtacaagg acgtgaacaa gcccccttc aatagcatgg gcgcatgcgg 300  
 caacatcccc atcttcaagg atgggtctggg ttgtgggtcc tgcttcgaga tcaagtgcga 360  
 taagcctgtg gagtgtctcg gcaagcccg ggtgggtgcac atcacggaca tgaac 415

<210> 732  
 <211> 411  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A7

<400> 732  
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 accccaacat gccacgggc atcgtgtctc agggctgccg catcgtgccg gagcagggcg 180  
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 ggacgggtggt gatggagagc accatcggcg acctcatcag gccggaaggg tgggaggagt 300  
 ggatggggcga cctcggcctc aagacgtct actacgccga gtacgccaac accggcccgg 360  
 gcgccggcac cagcaagagg gtcaactggc caggctacca cgtcatcgga c 411

<210> 733  
 <211> 357  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A8

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 attcccaatg caatgctgtg gctgagatgg gttcatctgg cctccgcaa taagccagga 180  
 ttgccgttgt tccttgcgtg aatatcagtc gattcagcaa caactctgac aaataatttt 240

caaagagaat gaatgatcat ctcatatatg agttagacaa cagggatatg caaacgagaa 300  
 gaatgacaac ttgggggacta gccaaagaaa taaatggcgc ctcaaataac ttataag 357

<210> 734  
 <211> 447  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A9

<400> 734

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 gctatctgct aaggaatgtc gaccggttta gataccttct accgggcaac tgcaggagag 120  
 aaagtggcta ggttttatgg ccactaccc tgcaacctgt tgtgctggg tgggtgggtg 180  
 ccagtgccac actgccccgc tgcaaagctg ctgtccatgg gatattctgt gcagttcacc 240  
 tggtagcggt gcctaacgta gttgaacaaa tgctttgggg aagaattggt tcatggatgg 300  
 gggtagcac atgattctct aatgtgtaat agaacatggg aggaggatct aacggcatag 360  
 cgcacgcttg gtctggctg ggtgtgcatg agctgagcgg tttgtcattg tcattcatta 420  
 cttccctgat tgatatatat aaactca 447

<210> 735  
 <211> 429  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B1

<400> 735

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 ttgctctgaa tgcttggcgt cgtataggct gccaaacaag agaagctatt aagaaaaaat 120  
 ttctacctga tctacttcaa atatatgaag aacaggtttag ggccttcatt gaaggtagtg 180  
 gtgacagcga cgtgcttggt ctgaatgtcc aggaccggt ccagaggctg cttctgcacg 240  
 gtgtttgtga gttctataac gtaacctcaa tgaccacaag cagtgtgaagg gacgggaagc 300  
 catggaagag caccaccatc aagaagaggc atgtcaccgg tcttcctccg agaatcacat 360  
 tagttagctt cctgaggatg aggaagaatt agtcgtcca gtaacatgtg gatgtgaggg 420

tcctacact

429

<210> 736

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B10

<400> 736

ggtccggtaa tcacgggtcg acccacgcgt ccgggagggc aatgacgagg gcccaggaga 60

ggcggccatt gaagaaccag ttggttctct tggtcaatg tcgctctgt cgcattctatt 120

catgtataat ccagaaatgg aggatggcaa tgacgaggac tcaggagagg aggcggccat 180

tgaagaacca gttggttctc ttggcgcaat ggcgcctcta ttcatgtatg atcaagaaat 240

ggaggacaac gaggaggatc aggcacacta gatgcagatt gcaccagctt caccgaaccc 300

tttgttttgt gtgcgggggg gctctactta tgtaatgtgg aatggaagga ttgcgcaagc 360

ttaaaagtat ggctggatcg gccttgtttt ttaactggtt ccctagttac tgccatctaa 420

tagccaacat ttttcccgt tttgt 445

<210> 737

<211> 424

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-B2

<400> 737

ggtcaggaat acccgggtcg acccacgcgt ccgacctgca gtcattctct ccaccaccac 60

caccaagctc aacaacagcc agtcgcgaa aataatgaag agccgcagca tggcatcatc 120

ggccgcgctc ttggtgctag cctcgcgct agtggcggcc accgccccac aggtagcgga 180

ggcaaagaag aagagagcgg cggagagcgg cgaggcggcg gaggcgaaga agatccagga 240

cgacttctgc tcgacgctgt gcgagggcaa gaaggggacg gacctggtcg tgtgcaagga 300

gtcctgcgcg ctctcccagc agtccaacct ggtgctgtac ggaggatcc agtgcaaggg 360

caagtgcacc gagcagaagg gcatcacggc gccggccatg aaggtctgcc angaggagtg 420

cgac 424

<210> 738  
 <211> 433  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-017-Q1-E1-B3

<400> 738

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catttccaac tgacaagctg atggagaacc ctgatttcta tagtgatctt ctgagagaaa 120
accttgatat aaggggtcagg ttgggtggtta actacaatgg ccttagcggtt ggtgcagtgc 180
gagatgtggt tgagaagtcc cttggcctgc ggctgcagaa gatgaatcct aacacagact 240
ttcactgctt gaagaccttt ggttctcact tcacagaaga tatcgctata ctttcgggta 300
cgaagattga cttctgtcaa acatcagatg ggaagcttat aacagaaatt gatgggaaac 360
aaattggtgc tgttcggagc aaagatcttt gcaaggcttt cttcgacatg tatattggtg 420
attcaccggt ttc 433
```

<210> 739  
 <211> 440  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B4

<400> 739

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ggtcaggaat atccgggtcg acccacgcgt ccgcccacgc gtccgcccac gcgtccgtgc 60
taaaacgaga gaaggatggc agtgtctcag ggagctgtcc tattcttggt tctcctcgtc 120
gcagcagagg tgggaaccat cgatgccaaa atgggagtag ccatgcccat gcatgccttg 180
ataatggaga aagcgaaaca gcaggagacg gagaagaagg aggagaaaag cacggagaag 240
gaagagagtc aatgcttatc gccgagtctc cagttcgagg gcttctgctt caacagcgac 300
agatgcgccg atgtgtgcat gaaggagagc tttcccgggtg gcgagtgcaa gcaggtcgtg 360
gccacgcgca agtgcttctg caagaagcct tgctagttca tcggtcttgc taattgttga 420
tgggtgcttc attaatttga 440
```



<210> 740  
 <211> 414  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B5

<400> 740

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ccacgcgtcc gccacgcgtc cggctggcgc tgccgcagag actgggcgac ggaccggcag   60
cgcctggccc gttgcgccag aggttcggg cacgcgacca ccggcggcct cggcggcaag  120
atctacgtgg tgaccgaccc caccgacctc gacgtggtga acccgcgccc cggcacgctg  180
cgctggggcg tcatccagcc cggcccgtg tggatcatct tcgcgcggtc catgatcatc  240
cagctctcgc aggagctgct catgagcagc gacaagacca tcgacgggcg cggcgcgcag  300
gtgcacatcg ccaacggcgc cgggatcacg gtgcagctgg cgaaaacgt catcatccac  360
aacctgcacg tgcacgacgt caagcacacc atgggcggcc tcatgcgcga ctcc      414
```

<210> 741  
 <211> 405  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B6

<400> 741

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ccacgcgtca gcttttcgcgc tgtccggaga ggaggggcag gatgaggcag caccaaattc   60
atctggggat ctgagcgcgg gcgacaagat gacacgcgga ggcaagcccg cggcttcgtc  120
aaagccgaac ccgttcgact cggactcgga cacggagtca agcaataagc cggcgaacaa  180
gtccggggcg tcgtcgtacc aggccccgc cgactccaag aagcggtaga aagactggtt  240
cagggactcg ggcaggctgg agaaccaatc ggtgcaagag ctggagcact acgcggcgta  300
gaacgccgag gagacgacgg acgcattcgc ctgctgcctg cgcacgcccg aggacatcag  360
gcacgacgcc agcgacacgc tgatcacact gcacaagcag gggga      405
```

<210> 742  
 <211> 440  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B7

<400> 742

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agttctctag ttttttgaaa caattgcatg atgagattgt ccgcttggag ttcagtcact 120  
acgatttgaa atcatcgaac acaatatctg caaaggactt tgcgttatct atggttgctt 180  
ctgctgatat gaatcacata gacaagtat tggatagagt tgatgatttg gatgacaatc 240  
ttgacctcaa ggatctgcgc attacctttg aggagttcaa ggcatttgct gatcttcgaa 300  
gaaggttgga accatttgca atggctatct tcagctatgg caaagtaa at ggtttgttga 360  
cgaagcagga tctaaaacgt gctgcatcac atgtttgtgg agtggacttg actgacaaaag 420  
tagtggacat aattttccat 440

<210> 743

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B8

<400> 743

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tggggcttct tccacgtggt caacaacgac tacacgcact ggctcatgta cgccatcggc 120  
ggcagcaagg cccccacat catcagccag ggcaaccgct acatcgcgcc gcccaacctt 180  
gccgcgaagc aggtcaccaa gcagcatgac acgccggagt cgggtgtggaa gaactgggtg 240  
tggcactccg agaacgacct cttcatggaa ggcgcctact tcaccgtcac cggcggccag 300  
attaacaggc agttcaaaa gaaggacctc atcaagccca ggaacgggtc ctacgtcacc 360  
aggctcacgc gctacgccgg ctccctcgcc tgcacgcccg gcaagccctg ct 412

<210> 744

<211> 478

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-B9

<400> 744

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caggaaggag aaatggcttc cgcacacaac gctctccggg tgtttttcat cctagccgtg 120  
gtatgtgccg tatgcacagc gaaaaggaca ggagccaaga aggaagaatc ggcggcagcc 180  
cctggtggtg ctgctggagg cagcggcggg acgttcgaca tctccaagct cggcgcgacc 240  
agcgacggca agacggactg cacaaaggca gtccaggacg cgtggacgtc agcgtgcgaa 300  
gcgaccggaa gcgccacggt ggtgatcccc aaggggcact acctggtcgg ccctctcaac 360  
ttcactgggc catgcaaggg cagcagcatc gccatccagc tggatggcaa cctgctggga 420  
tcaaacgacc tgaacaagta cacngcgagc tggatcgaat tgtctcacgt taacaaca 478

<210> 745  
<211> 429  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-017-Q1-E1-C1  
<400> 745

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gagccgagaa ggcgcagggt atgctgctca aggagatcgc gcagaagctc tgcaaggaca 120  
cgacaccacc agttccagcg gcagcagtgg ctcagcacag cttttacaaa gggggcaaca 180  
cacagccggc catgaccatc actgtgcgac caccacggca cccggctttg cttatgcaaa 240  
ggaaactggt gaagaagaag ccatcactcc ttgctgcagt ggtcaagtgg gttacatcaa 300  
tcatgtggtg gcgaaggaaa tcatcccgcg tcaagttccc tattgggcag tgccgcaaca 360  
acgtggggct gcttctgctg ctcgacaagg ctcccagggc aggccacggg caccagaggc 420  
cctcccaag 429

<210> 746  
<211> 475  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-017-Q1-E1-C12  
<400> 746

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tcttccatcc tacttgcaac gtcgatgctg gctgcgctgt ttgcggttgg tttgtgcacc 120  
 accccgctca ccttccaggt tggcaaggga tccaagcctg gccacctgat cctcaccccc 180  
 aatgttgcaa ccatatccga cgtggagatc aaagagcacg ggggcgatga cttctccctt 240  
 acgctcaagg agggcccaac gggaaacttg acgctcaaaa caaaggcccg ctcaagtacc 300  
 ccccttgcaa ccgctttgct gtcaagtccg gttgctaccg catcgctgac gacgtcatcc 360  
 ccgctgattt caaagccggc accacctatt agaccacact cagcatctaa tcagcctctg 420  
 atgatgaatt atatttcaaa agagctcaac tgggtgctcat gttagcaaga caata 475

<210> 747  
 <211> 440  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-C2

<400> 747

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 cctctcctgt tgtegctgct ggtcgccatg ctagcggtgg ccgccgatgt cgccaacgcc 120  
 ggccacgcca agccccctgac gcctggcggg cgcggtgttac acgacaacca cggcaagttc 180  
 acggccgggc cgtggaaacc agccacgcg accttctacg gcgggcggga cgggtccggc 240  
 accacggcgg gcgcgtgcgg gtacaaggac acgcgcgcgc aggggtacgg cgtgcagacg 300  
 gtggccgtga gcacggtgtt gtttggcgac ggcgcggcct gcggcgggtg ctacgaggtg 360  
 cggtgctggt acagccccag cgggtgcaag cccgacgcgg cggcgctggt ggtgacggcg 420  
 accgacctgt gcccacccaa 440

<210> 748  
 <211> 432  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-C3

<400> 748

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tggaaatgca tataactggag ctgatgcagg tacaagtgtt tcaggtggag gatccggtgg 120  
 cgccagtgca ggtaccagtg ctaccgtggg tgctggtgtc tccggaggtg ccaaagttgg 180  
 tggtagcgta ggaggaaatg caggaggaag tggcaacgtc tataactggaa ccggtgccga 240  
 tgcaggcggt tctggtggag gatccggtgg cgccgacggt ggtattggag ctaacatang 300  
 tgctggtgtc ttcggaggcg tcaaatttgg tggcgggccc ggaggaagtg tangaggaag 360  
 tggcagtgtc gctgcangtg cttctggang gagtanatca tcgggggggtg gctcagattt 420  
 tggatatggt tc 432

<210> 749  
 <211> 436  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-017-Q1-E1-C4

<400> 749

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 gaccgtgcgc gcgcccggc gcagtcggc atcgccacg tcgccgaggt cgccgcgtac 180  
 cgctcgtct tcttgactc gcaccactcc ttctacggcg ggctctacgt cgggggcgtc 240  
 gccgacgcc gcacccgcc cgcgtccgc gcgtgaagc agaacctgtc gctgctcgtc 300  
 tccatcctcg tggaccgcgc gcagccgtg gccgtccggg aggtgatgaa ggctcgttc 360  
 caggggttcc tcatcgtcct gtcgcccgc ggcagcgaca ggagcttcac ggtggangga 420  
 cacgcatggt tcgaag 436

<210> 750  
 <211> 411  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-C5

<400> 750

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 cggcggtttt gctgggtccc gcgctcctcc tctcctagg ctgttctggt tggggctgcg 120

gcggagggaa ctaggtaagg gggaaggaaa ggggaggttt gagggagagc gcagcggcag 180  
 cggcagcagc gatgccatcg cacgcggatc tggaccgcca gatctcgag ctgcgggatt 240  
 gcaagttcct gcctgaggcg gatgtcaaaa cgctatgcga gcaggccaag gcgacccca 300  
 tggaggagtg gaacgtgcag cccgtgcgtt gccccgtcac tgtctgcggc gacatccacg 360  
 gccagttcta cgacctcatc gagctctttc gcacgggtgg cgacgcgccc g 411

<210> 751  
 <211> 415  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-C6

<400> 751

ccacgcgtcc gcatgaacag gatggacagg gaagaacacc tctacaccgc gttccagtac 60  
 ttcgacaagg acggcagcgg gtgcatctcc aaggaggagc tggagcaggc gctcaaggag 120  
 aaggggctcc tggacggcag ggacatcaag gacatcatct cggaggtcga cgccgacaac 180  
 gacgggagga tcgactacag cgagttcgtg gcgatgatga ggataggagc cgccgagccg 240  
 aacccaaga agcggcgcca cgtcgtgttg tagcctgtgt aggagcatgc gtagatgtag 300  
 ctgctgatat atggtatggt atatcggatg gtaaaatgga acggcgtcca gcagttgatg 360  
 ccattgccac gacagtgggt gcttgacgc tggctgagca gcacaaggcg cgcg 415

<210> 752  
 <211> 411  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-C7

<400> 752

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 cacggcacgg ggacggaaat ggcggagggg aacggcggca gtcgcgccga ggctggcgtc 120  
 cgcgagtcct ccgagccctc gccgaagcgc tcctcgatcc ccgccatgcc gcacgaagaa 180  
 tgcgtcgagg gcacccgctc cgcgtcaaaa catcccacgg tgcggttcct gagggagcgg 240  
 atggagagtg ccgggtgcct ggtgtggccg cgcctcatcc gggcggcgac ctgctcctcc 300

gccggcgggt acgctagcca gcaagggata caagtttgct gcaatcacat gacctgtcaa 360  
 gatgagataa ctcagggtcat gattcatgaa ctgatacatg cttatgatga c 411

<210> 753  
 <211> 417  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-C8

<400> 753

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 gcggggcgga tggctgggca gaaccagcgg ctcaacgtcg tgccgacggg gacgatgctc 120  
 ggcgatcatga agggccgggt cgtcggcgcg acccgcgggc acgcgctgct gaagaagaag 180  
 tccgacgcgc tgacggtcca gttccgcgcc atcctcaaga agatcgtcgc cgccaaggag 240  
 tcgatgggag agacgatgag cgctcctccc ttctcctcgc ccgaggccaa gtacgctcgt 300  
 ggcgacggcg tccgccacgt catcctccag tccgtccgcg cggcatccgt ccgcgtccgc 360  
 tcccaccagg agaacgtggc cgggggtcaag ctcccgaagt tcacccactt cgtcgac 417

<210> 754  
 <211> 484  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-C9

<400> 754

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 ccacccatcg aggttggggc cgccagcagg ttcagccgtt cctgttcttg ataaaacgag 120  
 agaaggatgg cagtgtttca gggagctgtc ctattcttgt ttctcctcct cgtcgcagca 180  
 gaggtgggaa ccatcgatgc caaaatggga gtagccatgc ccatgcagtc cttgataatg 240  
 gagaaagcga aacagcagga gacggagaag aaggaggaga aaagcacgga gaaggaagag 300  
 agtcaatgct tatcgccgag tctccagttc gagggcttct gcttcaacag cgacagatgc 360  
 gccgaggtgt gcatgaagga gagctttccc ggtggcgagt gcaagcggga cgtggccatg 420  
 cgcaagtgct tctgcaagaa gccttgctag ttcacgggtc ttgctaattg ttgatgggtg 480

cttc

484

<210> 755

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-D1

<400> 755

cggtcaggaa taccggggtc gaccacgcg tccgccatga ctaggacgac gatggcccgg 60

ccgcgcctcc tcctcacctt cctgctcgcc gcgggcgccg tgctgaccac ggtgcccggc 120

gtcgcgctcg ccaagtgcga gctcgccaag aagagcgacg acgtcgtgaa cggggcccctc 180

ctgaccgaga agatccaggc gaagaagacg ctgatcgtgg ggccggacga ggagttcaag 240

accgtgcagt ccgccatcga cgcggtgccc gccggcaacg ccgagtgggt catcgtccac 300

ctccgctctg gcctgcacag gggcaaagtt gtgataccg agaacaagcc ctccatcttc 360

gtgaggggca acggcaaagg ccggacctcc atctcccacg agtccgcctc ttccgacaac 420

gccgagtcgg ccgcg 435

<210> 756

<211> 148

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-D11

<400> 756

acaaaatgca gggcttttgc ttccaagaaa acaagggcac cataacacaa aaccgttccc 60

aacacacaag caaggattct acgaccacg ggcatgcacg agccgatgag cccctgcaac 120

tttcaagtgc aaccgccggg gctgtttc 148

<210> 757

<211> 460

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-D12



<400> 757

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ctcctcgccc tcgtggcggt gttgtctgcc ggcctcttcc cgcangcgtt agggaaacggc 120  
aagggaacagg tgcattggcg cggtgccgtc aaccgctgg ttgccggcat ctgctctcgc 180  
gccccattcc cagaggtttg cacggccaca gccggggcgc atgcatccaa gtacccgggc 240  
atcgacaatt tggccgtgct gaacatgcag gtggccgcgt tcgccaagcg cacagcgcag 300  
gcgcggaagc acgtcgcggt ggccggccgc actattccac cgccgcaggc acaggccctc 360  
aggacctgcg acacgatgtt catgaacacg caagacgcca tccggggcgc gcagcgagcc 420  
atcgcgttca aggacacggg caccgcgaag atcatgctgc 460

<210> 758

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-D2

<400> 758

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cgatgagagc cttgttcctc ctggctctct tctgcatcgt gcatggtgag aaggaagagt 120  
caaagggcat cgatgcgaaa gcgtccgggc ctggtgggtc cttcgacatc accaagttgg 180  
gcgcctccgg caatggcaag acagacagca cgaatgctgt gcaggaggca tgggcatcgg 240  
cgtgcggcgg cactgggaag cagacaatcc tcatacccaa ggtgacttc cttgtcggac 300  
aactcaactt cacaggccct tgcaagggcg acgtgaccat ccagggtgat ggcaatctgc 360  
tggcgaccac ggacctaacg cagtacaagg accatggtaa ttggatcgag attctacgcg 420  
tggataacct ggtcatc 437

<210> 759

<211> 443

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-D3

<400> 759

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 acggaggcgg cggcagcggc agccccgagg cggccggcag caacgccagc ggcgcggcgc 120  
 gtgggtacag cggcatcccc gggtaccca tgggcggcct cgcgtccggc gcctggccgg 180  
 acgaggcgtc gccgtcgccg acgtccggcg cgaagcgccc ccgcgactcc ggccccgcgc 240  
 tgcagcagcc gctggcgccg cagctcagcc tgcccagcgg aaagaacaag ggcggcaggg 300  
 cggcctcggc ggagatggcg gcgatcgaga agttcctcca gttccaggac gccgtcncct 360  
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 cacaggaaat gcttctaatt ctttgggccc gagaaatgca agccgtgggg gagccgttac 180  
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 aataatataa atttttttt 439

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 <223> Clone ID: LIB148-017-Q1-E1-D5  
 <400> 761

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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-D6

<400> 762

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gctaaccgaa caagcctgta gttggacaag ggtgtaacac ttatttgtca ggcgtaccgg 180  
gcacagaccg ctctctatct gttcgtgggg atgtaactgt aagccttgtg acccctaagc 240  
agtctgcgtc ttgtgcctgc tgctgtagcg gtagagcaga gagagagatc aaatgtaaatt 300  
tacatttttt agctcaaatt cacgacaaat tgggtgtcct aaaaaaaaaa gaaaaaaaaag 360  
acaactacat aggcaatcaa gaattcaatt 390

<210> 763  
<211> 438  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-D7

<400> 763

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gggacaggaa atcagcggcc atggcctcga ttccggcgac gaccttcgcc gtcattttat 180  
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tccagggccg cgtctattgc gacacctgcc gcgccgggtt cgtgaccaat gtcaccgagt 300  
acatcgcggg cgccaagggt aggctggagt gcaagcactt cggcaccggc aagctcgagc 360  
gctccatcga cggggtgacc gacgggaacg gcacgtacac gatcgagctc aaggacagcc 420  
acgaggagga catctgcg 438

<210> 764  
<211> 252

<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-D9

<400> 764

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cggaggaaat gctagtgcct gtgcagctct aggctgcagc tttcatcatt ggcgatcgat 180  
cgtaacaatg caaggttggt ttgtatataa ctcttggtt tggaatgccg cccgtaatta 240  
atggtcaact ct 252

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<211> 426  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E1

<400> 765

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atgccacacc cagtgatcag aggcacattg agaagccttt taaagtgaag gaggcagaac 180  
ctgtgaatgt gacaaaacct tcaccacaca agctgctggt tctaggagga agtggtttcg 240  
ttggatcaca cgtttgcaaa gaggttttg acaaagggtt agttgtctct agtcttaata 300  
gatcgggaaa gccatcctta aatgaacctt gggctgacaa agttatatgg aaccaaggca 360  
acctccttga accagcttca ttgaaggatg ctatggataa tgtttctgca gtggtatctt 420  
gtgtcg 426

<210> 766  
<211> 432  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-E10

<400> 766

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 caccgccgca ttaatagttt accttccttc gatcgggtcat tctttcaaga ccgtactggt 180  
 agtttcacgg agtggttctat agcagattca gagccacagt tcgaaaactt gcagcttgag 240  
 gacgaggact ggtagtcaa gccaccactg tccgcaggag catatgctgg caatttcaat 300  
 gaagaagaat ggctggtcac accactgaag cgctcccggtg tcatgaatgg tattgaccat 360  
 gaggatgaag agtgggttagt taaggcgacg aaactgtctg gtgccaagga tgctgatctt 420  
 gaagctgaag ag 432

<210> 767  
 <211> 395  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E3

<400> 767

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 gacgaggcca gtggtgacgc cccagagggc gcagaagagc ttgaccctgc gctcgaagag 180  
 gagacgccga tggaggagac gatccgtgtg acgcgtgcc aagtaaggag gcgcacgacc 240  
 accgaagatc ctgctgggaa ttagctgcag gccatcgttt ttcctttccc tgcacattgt 300  
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<210> 768  
 <211> 439  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E4

<400> 768

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cgatatcgggg gccgccaacg ccgcgggcggc gcccgggcggc atgtccatca tcacctacaa 180  
cgaggagcac ggcgcgcggg ggctggagcg gacggagccg gaggtgcggg ccatgtacga 240  
cctctggctc gcgagacacg gccgcgccta caacgcgctg ggcgagggcg agggcgagcg 300  
cgaccgccgc ttcctcgtct tctgggacaa cctccgcttc gtcgacgcgc acaacgagcg 360  
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gttccgcgcc gcgtacctc 439

<210> 769  
<211> 416  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-017-Q1-E1-E5  
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tgaccgacgg gaacggcacg tacacgatcg agtcaagga cagccacgag gaggacatct 180  
gcgaggtggt cttggtggag agcccgcgca aggactgcga ccaggtgcag gcggacaggg 240  
accgcgccgg cgtcctgctc accaggaacg tcggcatcag cgacaacctg cgccccgcca 300  
acccgctcgg ctacctcaag gacgtgccgc tgcccatctg cgctcgtctg ctcaaacagt 360  
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<210> 770  
<211> 414  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-017-Q1-E1-E6  
<400> 770

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ggacggattg gtacgcctct tgagagttcg cgtgggccgg ggtatcaacc ttgcctaccg 180  
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aagcgtgaag aagagatccg tgaaccccat atggcaagag gagctaactc tgaccgtcac 300  
 agatcccagc caaccactga agctggaggt gttcgacaag gacaccttca gcagagacga 360  
 ccccatggga gacgcagagg tggacgtggc gccactgatg gaagcagtga gcat 414

<210> 771  
 <211> 412  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E8

<400> 771

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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E9

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 tgaacaggta gctgagaagg tgggtggtga ggagccggct gcggcgggcg acgttgagca 240  
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<210> 773  
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 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F1

<400> 773

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tggtaccggc ggtgggttctg tgcctcctgt tagcgacagg gccgcagggg gccatcaccg 180

tcgaggggat ggtgtcattt gactacttga tcagctgcaa ggtactgggc aactgcgagt 240

cgaacctgtg ccccgaggcc ctccgcccag ggaataccgc caccgactac acgacgcagc 300

tgcacgcgta taccggctgt cacggctga 329

<210> 774

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<212> DNA

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<223> Clone ID: LIB148-010-Q1-E1-G5

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cctcaacatc ttcgagtgcg agaacgtgct gatcgacaaa gtgacgggtca aggcccccg 120

cgacagcccc aacacggacg gcatccacat cggcgactcc agcaacgtga ccatcagcag 180

caccaccatc ggcgtcggcg acgactgcat ctccatcggc cccgggagca agatgatccg 240

catccatggc gtcaagtgcg gcccaggcca cggcatcagc gtcggcagcc tggggcgcta 300

caaggacgag aaggacgtgg aagacgtgca ggtgacgggg tgcacgatcg ccggcaccac 360

gaacggcctg cgcacgaagt cgtacgagga ctccaagtgc tcgctcaag 409

<210> 775

<211> 413

<212> DNA

<213> Zea mays

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<210> 776  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-G8

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 gtacaaggac gtgaacaagc ccccttcaa taccatgggc gcatgcggca acatcccat 300  
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<210> 777  
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 <212> DNA  
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<223> unsure at all n locations

<223> Clone ID: LIB148-010-Q1-E1-H10

<400> 777

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<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-010-Q1-E1-H11  
  
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ccggagcccc gaccgggggt g 441

<210> 779  
<211> 424  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-010-Q1-E1-H3  
  
<400> 779

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cattaggtcc tatgagattg gggctgatag gacggcatct atagagacaa tgatgaacca 180  
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actg 424

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<211> 448  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-H5

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tcttgacagag aggatcggtc accgtcgcgc cgcacaagct cgtcctgagg accgccatag 360  
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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-H6

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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-H7

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<210> 783

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-H9

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ccggacagcc aaaactctcg gtgcagtctc tgaaggccgt ctgtccctgt tccttcgggt 360  
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<210> 784

<211> 357

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-A1

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<211> 437  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-011-Q1-E1-A10

<400> 785

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<210> 786  
<211> 356  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A12

<400> 786

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gcgcccggc gttcttcttc catggctccg gccccatcca cggccgcgtc gaccgttccg 180  
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<210> 787  
 <211> 448  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A8

<400> 787

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ttgcgtgggt ttggtataag agatggtgat gtggtacatg cacttcctta aacagccata  300
ggttcttggg tgcatttttc ctttttagtgc cgactaatte tgctctgtct tgtgagataa  360
gccagaatat tacttaccct gtttcattta ccaaatagaa gttcctggat gcattttgcc  420
tttttagtgcc gactaattct gctctgtc                                     448
  
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<210> 788  
 <211> 338  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B10

<400> 788

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taccatcgcg ccaagccgag aagaaagatg gagatgatca aaaggatcct catcgccgcg  180
ctcctcgtag tcgctgtctc ggccaccgca gtgctgggct ccaacgatgc cgcagccgcc  240
ggcgctccag ccgcatccga gtcctctgcg tcagttgaag cccccgctgg tgccgccggg  300
gatggaggag gtagaggaac cgccgctgcg cgctccga                                     338
  
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<210> 789  
 <211> 121  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B11

<400> 789

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<210> 790

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B12

<400> 790

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cttctgctgc gttaccatgg gccaaacagc gaggaatatg ccgagagaga ggtagagaca 180  
gtttggctgt cgagtcacat ggagggtgcc ctgggtggccg gggaatcctt cacctgcggg 240  
gtgtacatc gccgggctgc tgcctcgtgg tctgcctcta ctaccagggc tgactccatt 300  
gccggacagc caaaactctc ggtcgagtct ctgaaggccg tctgtccctg ttccttccgg 360  
tcaagaacag gtaccacagg atgaggcgca tggaggatgc tgtgatgagt tcgtgagt 418

<210> 791

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B2

<400> 791

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gtgtcggcaa atgacctcaa gaaagtgtcg ctcttctccc ggactcgcat ctacgccgtg 180  
gcttccatct ccggattcga cctccgcac ccttcccaca gcaccaagc agaccacagc 240  
aacggctgca acccctgctg gaacgccgtg gtacacttcc ccatcccggc tgccgctgac 300

acccgcggcc tcgcactcca cgtgaggctc cgcgcccagc gtctatacct gggcgatcgc 360  
 gacatcggcg aggtgtttgt gcccatcgac gacctcctgg ccggcgccga caaggggtggc 420  
 gatccgaggg ccgtgagc 438

<210> 792  
 <211> 460  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B4

<400> 792

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 aaacgagagc ggcagacacc atggggagct cgaggaccat cgttgcgctc ccctgctcc 180  
 tcctcgccct cctcctcctg gctttcgcgg ccaccgccga ggcccgcgtt gtccccgagc 240  
 tgtttggcga ggaccaattc cagcggacat gcaaccaggt gcacttcagg aagatgtgcc 300  
 agagcttgac gaggctcccg agggtgacaa cgccgcgcga actgctgcta gcgtcgatgc 360  
 gcgtcgcggc ggagaaggcc aaagaggcca agagccgggt ggacgagttc gcggcgagga 420  
 accacgaggg ccggccgatg gagtccatcc tcggagcctg 460

<210> 793  
 <211> 454  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-011-Q1-E1-B6

<400> 793

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 gcccaaggcg gcgggggcgg tgccgtcggc cgaatcgttg tcgtcaccgc agaagccggg 180  
 tccggcggcg ggcaacggca cggacctggt gaccgtcgtg gggtcgacgc cggagggcga 240  
 gtggctggac accgtggtgg acccgacct gaggggagag gaggaggagg acaaggagga 300  
 gatggtgaag ctgataaggg tcggcatggc gtgctgcgag agtaacgtgg acagccgggtg 360



ggagctcaag accgccatcg acaagatcga ggagctcaat gccgaacgagc gccccgcccc 420  
cgacgacgag caggccttct actcgacggg gaac 454

<210> 794  
<211> 340  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B8

<400> 794

cgcggtccagg tggccgtcaa cgacgtcgtc ttcaagaaca tccacggcac ctccaacacg 60  
ccggaggcca tcacgtcaa ctgcgccaac aacctgccat gccagggcgt gcagctcgtc 120  
aacgtcgaca tcaagtacaa tggatccggc aacaagacca tggccgtctg caagaatgcc 180  
atcggcaagt ccatcggctt ggcaaaggag ctggcgtgca tttgaaccaa ttgactaaca 240  
tgcatatatt atgtactagg tttgtgcccg tgcgttgaca cggaagttaa aaattagtat 300  
aaaacaaaga tacataacga taaatatcac tatgacattc 340

<210> 795  
<211> 327  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B9

<400> 795

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cttaattgcy ccaactgctg ttatcctcct cttgcattgc attgcaggtc gtagttgagc 120  
agcagcaacc actgcacagg atgtcgtggc agacgtacgt cgatgagcac ctcatgtgcy 180  
agatcgaggg ccaccacctg agctctgccg ccatagtcgg ccacgacggc gccgtttggg 240  
cccagagcac cgcattccca cagttcaagc cagaggagat gaccaacatc attaaggact 300  
tcgacgagcc tgggtttctg gccccga 327

<210> 796  
<211> 410  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-011-Q1-E1-C10

<400> 796

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ccacgcctccg tctttatttg taatctgaag cttacaggaa catttgagtg gatcatggac 120  
ggattggtag gcctcttgaa agtccgggtg gtgaggggca tcaaccttgc ctaccgcgac 180  
gcaagaggca gcgatccgta tgcgtccta cgacttggca agaagaaact taagacgagc 240  
gtgaagaaga gatctgtgaa ccccatctgg cagcaggagc taactctgac cgtcacagat 300  
cccagcctag ctctgaagct ggaggtgttc gacaaggaca cgttcagcag ggacgacncg 360  
atggggggacg cggagatcga cgtggcgccg ctggtggagg cggcgaacgc 410

<210> 797  
<211> 140  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-C11

<400> 797

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tgggtaatca tctgtaaaat ataataataa aaataaaata aaatatgata taaatagggg 120  
gggggctcta aaggatccat 140

<210> 798  
<211> 421  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-C12

<400> 798

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cgcattccatc ctccacgctt cttgtcttcg ccttaattaa tgattaattg ttatgatcat 180  
gtcggccatc cgaatgccgt atgtatgcat gcacatcgcg actaattaat ccctgttgat 240

ttattactcc gtgaaatgta ctttctccgt acacacagca cactgctctt cggctaagat 300  
gaaactggta taaaccaatg ttgcattctg cataaggccc ctgacatgga tgcgcgcctc 360  
cactctactc gcgttcttgg cacctttggc taccattcac cacaatatgc catgactgga 420  
c 421

<210> 799  
<211> 446  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-C6

<400> 799

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cggcgcacgt cggcccgggg ctcacgtca ccaccgagcc ccaaccaatt aataatatat 180  
atatatagct aggatcgatc gtcagtaaaa tggcaggctc cgccgtcctg aggagcccc 240  
tgtccgtcct cctctacatc ctgcgcgcgg tgcccgcac cgccgcggcg acgccgaccg 300  
acgccgccat cgacgaggcg tacgcgcac tcgtcaacct caccgctaac caggagtact 360  
gggcgggagcg cgcggaggcg ggcacgcgt acaaccgcgc ggcgtaccag accgaccccg 420  
tggccgtcgt gcagcgcttc aacgac 446

<210> 800  
<211> 465  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-C8

<400> 800

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gcgcaggcgc atggccagct gccggcggac ctgcgcgcgg acgtgctggg taagctccct 180  
gacgtgcaaa gccagctgct ggcgaacatt acgcccgaga tgatgagcag tctcgccgcc 240  
gtgcagcagc ctgcggctgc tggccagcct ggggcggccc ctgctctccc ggccgacatc 300

cctcagatcc ctaagatgcc cgacctctct gggctggcca atatctcgtt ccagttatg 360  
 ccgtcggagc ccatgatgcc acacctgccg cccggacttc tcgttgtaca ggtacgatgt 420  
 cgccatccct aagttcatca ccaacatggc cgacggcaat ggcgc 465

<210> 801  
 <211> 377  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-011-Q1-E1-C9

<400> 801

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 cctgatcgac ccccgccgcc acatctctcc gtgcgggttt cttggaccgc atcccgatcc 180  
 gtcgcatgcc gcatacaatc ctcataggga aaagatgaac gaactccagc gattggttga 240  
 tcgatcggct gcagattgct ggcgcggcga cgaccgggtt cattgattgc tcgcgtgttt 300  
 ttcttttttc cganatattt tcttgattg ggtgngaagg aggaaggaac tggtagctct 360  
 ttcaatgttg ttcttga 377

<210> 802  
 <211> 383  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-D1

<400> 802

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 caacaacagc cagctcgcga aaataatgaa gagccgcagc atggcatcat cggccgcgct 120  
 cttggtgcta gccctcgcgc tagtggcggc caccgccccca caggtagcgg aggcaaagaa 180  
 gaagagagcg gcggagagcg ggcaggcggc ggaggcgaag aagatccagg acgacttctg 240  
 ctgcacgctg tgcgagggca agaaggggac ggacctggtc gtgtgcaagg agtcctgcgc 300  
 gctctcccag cagtccaacc tgggtgctgta cggcaggatt cagtgcaaag gcaagtgcac 360  
 cgagcagaag ggcacacgcg cgc 383

<210> 803  
 <211> 446  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-D10

<400> 803

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cgtggacaat aatggcgctt ctctggcgt cgatgctgct cgtcgggctc gccgtgggct 120
ccgaggagga ggaggacggc ggcggcaaaa agaagcccca cgtcaaccac ggcaagtta 180
aggcggagcc gtggacggac gggcacgcga cgtactacgg cgggcgcgac gggttaactg 240
acaccacgga cggcggcgcg tgcggctaca agggcgagct ggggaaagac tacggcacc 300
tgacggcggc cgtgggcccg tcgctgtaca ccaacggcac cgggtgcggc gcgtgctatg 360
agctcaaagg cccaagggc accgtggtgg tgacgggcac caacgaggcc ccgccgccg 420
tgacgggca gaaaggcgag cacttc 446
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<210> 804  
 <211> 264  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-D12

<400> 804

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aggcaatcaa aattgagcaa gtcgatagta caagagtgat gatacgctta ccattgctag 120
catgacgac gctaccagtg ccaccacaag gaccgcctcg gggcgtgggc ggtattggcg 180
atcgtatcag cggtcgccgc cgtgcgagat ttcgtcgcg tgctagccgc cgccacatca 240
ggagagctaa ccacgatggg gttg 264
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<210> 805  
 <211> 459  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-D2

<400> 805

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cctccgcgcg ctcccgtgc cgcacgggac caacctgttc gcctgttcat cactcagcg 180  
acattcacgc ccgcatctcg ccgtgggcag caccgcactc accaccgccg tcgcagttag 240  
gtcacgagtc agctgaagag caagttggta cctggaatct caagtcccag gtcaagaaca 300  
ggtagccgag gatgaggcgc atggaggatg ctgtggcgag ttcgtgagag gtctaggcca 360  
tcgtctcca gtcaactttg ggttgctgga ccgttgtctc cttataatga aattatttat 420  
ttattttgta tagaactcct gttatatagt aaagatgtg 459

<210> 806

<211> 357

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-D3

<400> 806

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cgccggctat cgtcatcgcc acagccgcaa cctcgaagga ggaggaggag gaggtggagt 180  
cgccaagaa agaagcggct ctgtcgccgg cgccggagcc tatcgtcatc gccgccgctt 240  
taacctcgaa ggacgangag gaggtggaat cgccaagaa agaagcggct ctgtcgccgg 300  
cgccggcgcc ggaggccatc gttgccgtat cagcagtgga agacgtggtg gcggaca 357

<210> 807

<211> 462

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-D5

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gttcgccatc cgctacgcgc tctccggcaa ggcttgaac aacatcaaca acaagacggc 120  
cttcaccaac cgcaccgact acggcaaggg cgagcgagag ggcgagtggg ccacggcaca 180  
gaggacgctg cacggcctca accaggccac cgccacctcc gacctcttcg ggcacaacca 240  
gggctaccgc gagctgtcgg agctcgccga gcaggcggcc aagcgcgccg aggtggccag 300  
gctcagggag ctgcacacgc tcaagggaca cgtcgagtcg gtcgtcaagc tcaagggcct 360  
cgacattgac accattcagc agagctacac cgtgtaaact cgactcagtt tttttatttg 420  
cttttttttg cagacaaata caaaccacac acatatatat at 462

<210> 808  
<211> 442  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-D7

<400> 808

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gcggttcgtg cgggcccccg aaggtgccac ccggccccaa catcaccacc aactacaacg 120  
gcaagtggct caccgctagg gccacctggt acggtcagcc caacgggtgcc ggcgctcctg 180  
acaacggcgg tgcgtgcggg atcaagaacg tgaacctgcc accctacagc ggcattgacg 240  
cgtgcggcaa cgtccccatc ttcaaggacg gcaagggtc cggctcatgc tacgaggtga 300  
gatgcaagga aaaacctgag tgctcgggca atccagtcac ggtgtacatc actgacatga 360  
actacgagcc tatcgtccc taccacttcg acttgagcgg caaggccttc ggctccctgg 420  
caaagcccgg gctcaacgaa ca 442

<210> 809  
<211> 278  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-D9

<400> 809

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tccaccatcg gtgcacagaa cggtgggcac gatgacgatc aacaacctcc tcctcgtctt 120

cgccctggtt tctgcggtcc ttggtgcggc gacggccgcc gccaacgcgt tcagcagggc 180  
gttcagcatc tgggtggaga tgaaccagca gtgctacgcy ctgtacgtcc aggactgcgt 240  
cagggaccgc ggcaacgagc cctgtacaa ggagctgt 278

<210> 810  
<211> 397  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-E1

<400> 810

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tcggcgatga acatccgcgc gtagccgtgg atccgcctcg tcacggggcca caccacacc 180  
accgggttgt cgggcctggg cgtcacctg ttctccacc ggtacaagaa cccgcggccc 240  
gccaccggcg gctgctgccc caggaacttg aggttgctct cgaacttggc ctccggcagg 300  
tccgtgtcga tccagttgtc cctgaggtac ccggcgctcc acaggggctc cccggggccc 360  
ggcgccggcg acctgcgcgg cttccacacg cagatga 397

<210> 811  
<211> 446  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-E10

<400> 811

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ggccagaacg agcgcaagta cgacaggctc gacctatcc aggccaaggg cggccagtac 180  
gccgagtcgc tcaccagga cgccggcgcy ctcaactgcc gcgtcggcag gaagtgctag 240  
tgcgtgtgca gctctaggct gcagctttca tcattggcga tcgatcgtaa caatgcaagg 300  
ttgtgttgta tataactctt gtgtttggaa tgccgcccg aattaatggc caactctaac 360  
actgcttgcc ttgcttgcc ggccagcaac accattgtcc cttgtggctc ctgagttctt 420



ccttgtttat ccatgcatgg aaaccg

446

<210> 812

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-E12

<400> 812

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tgctctgcct gtcctcttct tctggccgtc tcgccgcggc ggagaagact ttccgcggag 120

gcggaggcgg aggtacggc gggttggagg ccggtggcgg aggcggcggc ggcggtact 180

ccaccccgag cgaggcagcg ccatccacgc ctgccgttgg ggagacgacg accccttctg 240

caggcggcgg ttactccacc cctagcgagg cagcgccatc cacgcctgcc gctgaggaga 300

cgacgacgac tccttcgtca ggcggcgggg gttacggcgg tgcaaccggc aaggcttcct 360

caagcggcgg cgggctggac cccgacggcg acccagaggt tgggctgaac gggaaggcga 420

tcgaggagat cgtgaacg 438

<210> 813

<211> 409

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-E3

<400> 813

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gctcggagggt cagccgccga gaagagctca taggcaatgg caaccgcaag gaaggatcct 180

cagcaggttg ataaagtcaa cctgaaacct agcgagtctg gcaaaggggt agtacggcgt 240

gcaaggctctg tcccgacctc tccggatcgc agatcgctcc catccccggc cccagtctca 300

gacaacgcca gccgaccggc atcatcactc aacactcgca cgacctcgtc ncggtccaca 360

acaacatcta gctcggcggc ctcttcaagc cacgggaaga cgatgcgct 409

<210> 814  
 <211> 425  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-011-Q1-E1-E5

<400> 814

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aactgtttcc tcaacctccc gaccaacca cggccgtgcc cgccaaggcg ccaaccgcac 180
agcagcagct ggggtgctga cgtgctgtgg gtggttctgt tgtccatggc gcggaagcat 240
cagcatgttg ccatatttac cacagcgtgc ttgccgtgga tgactgggac tgcggtaaac 300
ccactgtttc gggctgcata ccttgccaag gctggagatt gggaggtcac gctgggtggtg 360
ccttggtgtg ccaaggggga tcaggagctc gtttatccaa acaagatgag gttcagtttg 420
ccggc 425
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<210> 815  
 <211> 438  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-E7

<400> 815

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cttttgaga cgcgatgtcg tccggcaaca agatcagcgt ggccttgctg agcgtggccc 120
tagtgggcct gtcctctgc cacctcgcca ccaccgcctc cgcccaccag aaagacatcc 180
acgtcctcgg cagcgtcgac ggctccagcg acggcagcag ccccgagtcc gaaggccgcg 240
tcgtctacgc ggacatgaag ctggctgata cggaatccga tgcgccggcg ccggcgccgg 300
cgccggggcc gtcgtccggt tgaactgaga agcgtgcgtc cagccaagca atgtggtcag 360
aaccgagaac taattaaggg ctcgatcgtg tgtcaggcta ctactgttct tgccataatt 420
atatatagat acgcaaag 438
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<210> 816

<211> 51  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-E9

<400> 816

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<210> 817  
<211> 404  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-F1

<400> 817

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caccgccccc cttcccaacg gtcgggcagc ggctgccggg ggggcgcggg cgcgccctggg 120  
ccgcgacggg ccgccctccg agctggacgt gatgaaggag aagttctcca agctcctgtt 180  
aggcgaggac atgtccggca ccggcaaggg cgtgccgtcc gcgctcgcgc tgtccaacgc 240  
catcaccaac cttgcccgtt ccgtcttcgg cgagcagcgc aagctggagc ccatggcgcc 300  
cgacaccaag gagcgctgga agagggaagt cggatggctg ctctccgtca ccgacctcat 360  
cgtcgagttc gtgccacgc gccagaccgc ggagaacgga acta 404

<210> 818  
<211> 396  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-F10

<400> 818

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cgaattagac gacttcttcg tccctctctt cattagcacg ctaacttgta atctgcagga 120  
tctaagcaaa gacttgattt agttatggac ggattggtag gcctcttgaa agttcgcgtg 180  
gtccggggta tcaaccttgc ctaccgcgac gcaagaggca gcgatccgta tgcgtccta 240  
cggcttggca agaagaaact gaagacaagc gtgaagaaga gatccgtgaa ccccatatgg 300

caagaggagc taactctgac cgtcacagat cccagccaac cactgaagct ggagggtgttc 360  
gacaaggaca ccttcagcag agacgacccc atggga 396

<210> 819  
<211> 408  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-F11

<400> 819

ccacgcgtcc aggaacatgc cccccggcat gccgcaggtg ctcacgtca cgggcctcac 60  
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ccacggcagg cccgacggca gcccacaaga ggtggccagg ttccaggagg gcgtccggca 180  
gggcgccttc ggctgtctc tcaactcctt cgtcctcgga gccagctcct tcctcatcga 240  
gcccattgtc cgcaagctca cgcgaaggt cgtgtgggtc atgagcagtt tcctcgtctg 300  
cgtcgccatg gccttgggtc cgtcctcag ctcctgggtg ctcgcgaca tcgggggcaa 360  
agtgaagac gccgcgcgcg tggataagg cctcaagacc accgcgct 408

<210> 820  
<211> 449  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-011-Q1-E1-F2

<400> 820

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ctgacctccc aaagctgtgg tcgcgattca aacaaaaagg aaatgatcag gcgacaaccc 180  
ggcatggatc ggttcctgca gctgctggcc gccggcgtgg ccgtgctact gctagtggca 240  
acgcgggcca tggctgacga cgacattgta aaagtengcg tcaactgggg atcgagctc 300  
tcgcaaccgc ttctccccgg ctcctgggtg aagatgctca aggcgaaacg catcgccaag 360  
gtcaagatgt tcgacgcga ctcctggccc gtcggagcgc tcgtcgactc cggcattgag 420  
gtcatgctcg gcatcccaa cgacatgct 449

<210> 821  
 <211> 324  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-F4

<400> 821

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cccaggcctc cgaccaacag aggctgcgcc agcgagatgt tctacgtcat catgacacgc 60
ggcaggctgc ggccgggacct cttctcgcag ctgtgcgtcg aaggcccgtt gggcctccag 120
tgctgatcaa cactggcctg ctgccgccca ccgcccgaa tctatctatc tatctatctc 180
cttgaaaaca tatatcagac gatgccccag cgcgtgccgc tgatttgatg caagtatgct 240
gttttcattt gtaaatacga gtcgatccat actaagcgat acaggaaaag aaaaaacca 300
agggcggccg ctctagagga atca 324
```

<210> 822  
 <211> 342  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-F5

<400> 822

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cgctccaag aggtgggtccc cgtgggctgg gacggctggc agatcgccaa gccggagagc 60
agcggcatct actacggcga gttcaagtgc tttggccccg gcgctgacgc caagaagaag 120
aagaggggtg ggtgggctgt ggacctcacc gaggcgcagg ccaagccatt cgtcggcaca 180
cactacgtcc tcggcgacac gtggatccag ccaccgccca agtagcgacg catgccacac 240
gatatatcta tttgagtacg aagcaaaagc gagagacacg aatctctaata ctctttactg 300
atgagatggt ttgcttatat atatatatag acgagctaata ga 342
```

<210> 823  
 <211> 448  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-F8

<400> 823

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 ttccacagcc ggaccgaata gggcgcgccg cgggaaatgg ggagaaaagg caagtgggttc 120  
 gacaccgtgc agaggatcct gatcacctct gaacctgatc ccgtggagac gcagaacgat 180  
 gatgccgccca agctcgatca tcacgagaag gctgcgaagc tgagagacaa taagtcggcc 240  
 atcaggagga tatggcagtt cggcaaata aactcgtcgg gtgcttccgc ctccgcgacg 300  
 gcgccggagg acgcggaggt tcttcagttt ccgaagtcgc caaggtcgga caacgagtac 360  
 catgtcgtcc aggacctcac cgaggaggtg ccgttcatgg agacgagagg cgaggaagaa 420  
 gaagaagaag acggcgagcg catgaacc 448

<210> 824  
 <211> 432  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-011-Q1-E1-F9  
 <400> 824

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 ccagatccgg caccgcccgc tgctcgaacc cgcacccac gcccgagggc cgggaccggt 120  
 gggcgcgcg cgggcagtag gagggagagg aaggggcgga tggcgggcgcc gccggcgagg 180  
 gcccgggccg actacgacta cttatcaag cttcttctca ttggggatag cgggtgttggc 240  
 aagagttgcc tcctgttgcg gttctctgat ggttccttca ctacaagctt tattaccaca 300  
 attggtattg actttaagat acggacaata gaaatggatg gtaagcgtat anagctacag 360  
 atttgggata cagcggggcc aagaacgctt ccgtactatt accactgcgt tctaccgtgg 420  
 acctatgggt at 432

<210> 825  
 <211> 428  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-011-Q1-E1-G1  
 <400> 825

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cttcacagga actccgacgt gcaacggcgg ccttcaccac gaactcctct tctgggctga 120  
tgatggtgcg gcagagagtc agggatgatg ttatTTTTTT ggagatgaac tgcagcaggt 180  
cttgcggtga tttggaggca gcctcacggc agtatggaat ggactcccc ggaatgatcg 240  
ctgtggcctg ctatttatac actaccgga tttggctctt tgccgagtgc caaattcttt 300  
gtcgagtgtt ttatttcggg cactcgacaa agagctcttt gccgagtgc acgcaaaaaa 360  
ccctcggtaa aagaaaacac tcggcgaaaa agctctttgc cgagtgtttt atttttgaca 420  
ctcggcaa 428

<210> 826

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-B2

<400> 826

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cgccgtgccc gccaccgccg cggcgacgcc gaccgacgcc gccatcgacg aggcgtacgc 120  
gcatctcgtc aacctcaccg ctaaccagga gtactgggcg gagcgcgcg agggggcgca 180  
cgcgtaaac cgcgggcggt accagaccga ccccggtggc gtcgtgcagc gcttcaacga 240  
cggcggtcac agggcgacgg cgacgcggtc gcggtcgctg gcgcacaagg cgcggggccc 300  
ctgcacgggg accaacccca tcgaccagtg ctgggggtgc cgccgcgact gggcccgcga 360  
ccgcaagcgc ctggccaggt gcgcat 387

<210> 827

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-B4

<400> 827

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caggtcgtag ttgagcagca gcaaccactg cacaggatgt cgtggcagac gtacgtcgat 120

gagcacctca tgtgcgagat cgagggccac cacctgagct ctgccgccat agtcggccac 180  
gacggcgccg tttgggcccga gagcaccgca ttcccacagt tcaagccaga ggagatgacc 240  
aacatcatta aggacttcga cgagcctggg tttctggccc cgatcggcct cttccttggc 300  
cccaccaagt acatgggtcat ccaaggcgag cccggcgctg tcatccgcgg gaagaaggga 360  
tctggaggca taactgtgaa gaagaccgga caggcgctgg tgatcggcat ctacgacgag 420  
cccatgaccc ctggacagtg c 441

<210> 828  
<211> 426  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-B5

<400> 828  
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cgcgccctatg gatgcttctt ggaggaacgg ctcgagtgcc tcagggttct cagatacgac 120  
atcgaaaccg agcgtctcgt cagatatccc cagacttcca gcaaggtaca tagtaaaacc 180  
aggaccctgc ctagcccgga actcttggag cagttgcctg cactgcagca gctgcttttc 240  
agggttgtcg gcgtccagcc tgaaggcgct gcctgtcaa attaccttat tcagtacgca 300  
ctagccctgg ttctgaagga gagcttcaag atctactgct caattaacga tggcatcatc 360  
aatctcgtcg atatgttctt cgaaatgccg aagtacgacg caatcaacgc tctggcgatt 420  
tacaaa 426

<210> 829  
<211> 419  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-B6

<400> 829  
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cgagggcctc gtcacctccc gctcgtcccc ctccatctac ctcgtcttcg agtacctcga 120  
gcatgacctc gccggactca gtcctcccc cgacatcacc ttcaccgagt cgcagatcaa 180



gtgctacatg cggcagctgc tcgaggggct ggcgcactgc cacgcgcgcg gggatgatgca 240  
 ccgggacatc aagtgcgcca acctgctggt gagcgacggc ggcgagctca aggtggcgga 300  
 ctccgggctg gtgaacctct tcgcgccggc gccggcgggc ccgctgacca gccgggtggt 360  
 cactctctgg taccgcccgc cggagctgct cctgggcgcc acggcgtagc agccctccg 419

<210> 830

<211> 341

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-B7

<400> 830

cggtcgacc caagcgctcg ggatcgtaa ctgccgcgc cgccaaggac agcccaacgt 60  
 cgtcgtggct cgagggcctc gtcacctgc gtcctcttc ctgatctag gtcgtcttcg 120  
 acgtatggcg gagcatgagg tcgcccgac tcgagctcgt ggggggcata tcagcattca 180  
 ccgtggtcga agatcaagtg ctactatgcc gcagtatgct caaggaggct gtcgcagtac 240  
 cggggcacgc gagggtgcag gcacacggga catttcggtg cgcggaagaa tgactgagtg 300  
 tcccactggc tggtagctca cagtggcaga gggtcaggat g 341

<210> 831

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-B8

<400> 831

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 tcggcgtcgg cgacgactgc atctccatcg gcccgggag caagatgatc cgcattcatg 120  
 gcgtcaagtg cggcccaggc cacggcatca gcgtcggcag cctggggcgc tacaaggacg 180  
 agaaggacgt ggaagacgtg caggtgacgg ggtgcacgat cgccggcacc acgaacggcc 240  
 tgcgcatcaa gtcgtacgag gactccaagt cgtcgctcaa ggccagcaag ttctgtacg 300  
 agggcatcac catggacaat gtctcctacc ccatcatcat cgaccagaag tactgcccc 360  
 acaacatctg cgtcaagtcc ggcgcctcca aggtggccgt caacgacgtc gtcttcaaga 420

acatccacgg

430

<210> 832  
<211> 406  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C12

<400> 832

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catcctgcgc cttgaccttg ctgggcgtga cctgactgac agcctgatga agatcctcac 120  
tgagagaggt tactcettca ccacctctgc tgaacgcgaa attgtaagag acatcaagga 180  
aaagcttgca tatgtggctc ttgaatacga ccaggagctc gagaatgcca agagcagctc 240  
atctgtggag aagagctacg agctgcctga tggtcagggtg atcaccattg gggcagagag 300  
gttcagatgc cctgagggtcc tcttcagcc ttccttcatt ggtatggaag ctctggcat 360  
ccatgagacc acctacaact ccatcatgaa gtgcgatgtc gacatc 406

<210> 833  
<211> 449  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C2

<400> 833

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actgcatttc catcgcccc gggacctcca aggtgaacat caccggcgtg acctgcggcc 120  
ctggccacgg catcagcatc ggcagcctag ggcgggtacaa ggacgagaag gacgtcacgg 180  
acatcaacgt caaggattgc actcttaaga agacgatgtt cggcgtccgc atcaaggcgt 240  
acgaggacgc cgctccgtg ctcaccgtct ccaagatcca ctacgagaat atcaagatgg 300  
aggactcagc caaccccatc ttcacgcaca tgaagtactg cccaacaag ttgtgtactg 360  
ccaacggcgc ctccaaggtc accgtcaatg atgtcacctt caagaacatc accggcacct 420  
cctccacccc ggagggccgt tagcctgct 449

<210> 834

<211> 448  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C4

<400> 834

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tcaatccgtc cggcggcgcc cccaagcagg tcgacaccaa cgagtgggtc aagcccaagc 120  
caggaaccta cgttacaagg ctcacccgct tctccggcac actgtcctgc tgcacgggca 180  
agccgtgctg aaggccggcc ggtgggcgtc agaggctgct tcttctagct catggcctgg 240  
ccatgccagg tcgcgatggc tgcgtttcat ttcattggaag aaagcaagga tggatcacag 300  
gttgtcgttc tgctaattaa tcgacgtttg ccttcaagta ctgtgttggtg gcattgttac 360  
acatcacagt acagtttggc catttttttt ccacagagga agtacggatt gattttaatcc 420  
cacacgcgtg gtactacgta tacagttt 448

<210> 835  
<211> 429  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C5

<400> 835

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caccgcctca tcttcttgga ctgcgccac tccttgtaac agggcctgta cgcccgagc 120  
gtggcggacg cccgcattcg ccccgcgctc cgctgctga agcagaacct gtcgttctctg 180  
gtgtccgtgc tcgcggaccg cgcgcagccc gtggcgggtgc gggaggatgat gcgcgcctcc 240  
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gaccacgcca cgggtggagga ggacttccgg agcctgaggg gcgccttctc cacgtgcggg 360  
gaatggctgg tccccgagac gtggtggcgc gggatgcaga gaccgccgaa gccgtcgtgg 420  
ggctcatgg 429

<210> 836  
<211> 438  
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C6

<400> 836

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gggctgagcg tgatcgtgag cgccgtgctc accagccgag ccatcttcca gcgcatgaag 180  
aactacacca tctacgccgt gtccatcacc atccgcacgt tgctgggctt cctgctcgtc 240  
gcgctgggtct ggaagtctga cttcgcgccc ttcattggtgc tcatcattgc catcctcaac 300  
gacggcacca tcatgaccat ctccaaggac cgcgtgaagc cgtcgccgac gcccgactcg 360  
tggaagctca aggagatctt cgccacgggc atcgtgctag ggacctacat ggcgctcgcc 420  
acggagctct tcttctac 438

<210> 837

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C7

<400> 837

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gccattgccg ccgccgcgct gactggggaa gatggttgct caggagttca cagttgatct 120  
caacaagccc cttgttttcc aggttgcca tcttgaggaa cggtaccagg aatgggttca 180  
ccaaccgatc gtcagcaagg aggtccacg ctttttcgga aatgatgtcc tggagttctt 240  
gactcgacg aagtgggtggg ctgtgccaac tatatggctg cctggtgtct gctgcctgct 300  
cgtgaaatct attctgatgg gtcataccgt tcatgacgta gctatgatgg ctctgtttgg 360  
gatatttatt tggactctga tcgaatacac tttgcaccgc ttctgttcc acatcgagac 420  
caagacctac tggt 434

<210> 838

<211> 132

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C8

<400> 838

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cgtcgaccag cgcgcgattg gcgacgctgg cctgactgag gaagacggct cgcaaatcgt 120  
tcagaggtaa tg 132

<210> 839

<211> 176

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C9

<400> 839

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tagcgctggc gctgcagtag ctctccgtag actctactac agacgtgagc catggaccat 120  
gtcgtcgcgt cgctgcagca gatcagtaat ccccatatag caccaaggat gccac 176

<210> 840

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D1

<400> 840

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ctgtcgctgc tggtcgccgt gctagcgggtg gccgccgatg tcgccaacgc cggccacgcc 120  
aagcccctaa cgcttggcgg gcgcgtggta caccgacaacc acggcaagtt caccggccggg 180  
ccgtggaaac ccgcccacgc aaccttctac ggcgggctgt acgggtccgg caccacggcg 240  
ggcgcgctgc ggtacaagga caccgcgcacg caggggtacg gctgcagac ggtggccgtg 300  
agcactgtgc tggtcggtga cggcgcgggc tcgggagggt gctacgaggt gcggtgcgtg 360  
gacagcccta gcgggtgcaa gcccgacg 388

<210> 841

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D11

<400> 841

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cgggtgttctg gagacagagc gagagagaga gagagagaga gaggtagacg gagatggagt   180
gcctgctggg gctgctcaag gtgcgggtgg tgcgaggagt gcacctggca atctgcgacc   240
cgctcaccca cagcagcgac cctacgtcg tctccgcca cggaaagcag aaagtgaat   300
caagtataaa ataccgcagc attaaccagc aatggaacga ggagctcacc ctgtccatca   360
cgaacatgat gaaccgggtc aagattggac tctttcgaca cg                               402

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<210> 842

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D3

<400> 842

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cccgcgtcca ggctgattcg tggatggcgg tgccacaacc tctcctgctg tcgctgctgg   60
tcgccgtgct agcgggtggc gccgatgtcg ccaacgccgg ccacgccaaag ccctaacgc   120
ctggcggggcg cgtggtacac gacaaccacg gcaagttcac ggccggggccg tggaaacccg   180
cccacgcaac cttctacggc gggcgtgacg ggtccggcac cacggcgggc gcgtgcgggt   240
acaaggacac gcgcacgcag gggtagggcg tgcagacggg ggccgtgagc actgtgctgt   300
tcggtgacgg cgcggcctgc ggagggtgct acgaggtgcg gtgcgtggac agccctagcg   360
ggtgcaagcc cgacgcggca gcgctgggtg tgacggtgac cgacctgtgc                               410

```

<210> 843

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D5

<400> 843

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cgaaaatgac ccgtgccagc agcagtagca gcagccggcg tgtgacgctg gtactgctcg 120  
gtctccgcct gctgcttctg gttgggtgtt cgcaggcggt agtggagttg gtgcctgctg 180  
atgataatat cgccgccgcc gctgctggca cggcggtgga cgatggcgag ccgcctcagc 240  
agtgcgcgac cccggtgagc gtggaggagg cgtgccgcgg cgcgtccgag acgcacgccg 300  
gcgtggccta cgaccactgc atggcgctgc tgggcgccga cccgcgcagc aaggaggccg 360  
gcaacaagaa catgcacggg ctggcggtgc tggccaccag ga 402

<210> 844  
<211> 415  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D6

<400> 844

ccacgcgtcc gcagcgtctc caccctcctt ccaagggcca cgatgagggc gcctctcctc 60  
tctctgctcc tcgtctctgc cgtcgtcgcc accgtgcctc tactactccc ggcggtgtgc 120  
atctcgccgc acgacaagtc cgagagcaag gctgacgaat aagctgctgc tactaccgtt 180  
gccgccgacg agcatggctc tgtcaagacc atgtccctcg acgcatacgg gccactggag 240  
atggccgccca agaagcccaa ggagcaggtc ctgaacgcgc aagctacgcc ggcgacgacc 300  
gctggcgctg acacatatga ccagaaaccc gttgggtgaaa aacaggctga aacggccacg 360  
gcctccgctg ccgatgaaca acccgacaaa tacggtggaa gctcctattc ctgac 415

<210> 845  
<211> 355  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D7

<400> 845

gatcgattga acagtttgac atcagcattt tcagaggaac aaattaaatc cacatgccat 60  
cagtcgaagt cacatccaca gcagagtcgg tcagttagaa aaggaaacca atcgattaat 120  
cgagcagagc aggccggatc acgagaggga cttggcgacg ggggcagttg agaggaggcc 180

ggagagcaag ccgacgacga ggcgctgtt gtacgtggtc ggctcgttct gctgcacgtt 240  
ctccctgtcg tcgacgaacg agtcgttctt gaacggcccg ccgaccagcg cgcccgtggc 300  
gacattcggg ttgggctcgg gcgacttgag ccactcctgg ccgtcgcagc cggtg 355

<210> 846  
<211> 404  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D8

<400> 846

ccacgcgtcc gctgacgcgt gggcaggcat cgccctgcc cctccaacg ccggagcgcc 60  
ctcctacggc gggggggcgc cttccggggg ctcgcgcgat gccccgcgc gcgcctccga 120  
gggccctgcg agcgccagcg gccgctctgg tgacgacgcg ccggcgctccg gtgctgggtg 180  
cagcgcgctg gctgctgatg ctccggcggc ggcggcctca tccggtccct cgagcgcacc 240  
agcgccatcg tcgtcgtctg agtcctccgc cgcacgatgc tcattctctg atggcacctc 300  
gagcgcccca gcaccatcgt ccggcgacga ttctgattcc aacgaccatg ggtcaacttg 360  
agcctgaccg atgacgcagg tttgggttac cggtgccact caaa 404

<210> 847  
<211> 347  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-E1

<400> 847

cacgcgtccg gccgccgtca tcctatgcct atgcgtcgtc ctctcctgtg ccgcggctga 60  
cgacccgaac ctccccgact acgtcatcca gggccgcgtg tactgcgaca cctgccgcgc 120  
cgggttcgtg accaacgtca ccgagtacat cgcgggcgcc aaggtagaggc tggagtgcaa 180  
gcacttcggc accggcaagc tcgagcgcg ccatcgacggg gtcaccgacg cgaccggcac 240  
ctacacgatc gagctcaagg acagccacga cgaggacatc tgccagggtg tgctgggtggc 300  
cagcccgcgc aaggactgcg acgaggtcca ggcgctcagg gaccgcg 347

<210> 848



<211> 430  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-E12

<400> 848

ggccgacgca cgcgtccacg agcaccgccg cggctagggt tacggccacc gccttccacg 60  
cctccccac ttcccgtagg cggaggctgg tcggcgtgca cgcgaccgcg gcggcggaga 120  
tggaccgcga cttctcgccc gggggcgggg ggcccagctt tgaattcgcc ttcaacgagg 180  
tcaactttct cgaccgggaa ttgcgtatcg aggtcgtcgc cggggatgac tacgctccgg 240  
ggtccagcgg cgccggtgcc ggaggaggtg gcctcgccga ctgggcgcgc caccgcaagc 300  
gccgccgtga ggagctcttc aaggagaaaag aatctacaac tcacatgtca gaccaaacia 360  
attgcaatga agttgaagca gaagagtgtg atgcgtatga agaaaatcaa gaggaacctg 420  
tagcaatggt 430

<210> 849  
<211> 109  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-E4

<400> 849

cacgcgtcca gaaacatgca aatggagaag gaattgtttc tgcctttcta agattcttct 60  
tagcacaatg tgcaaaactt tttcataatg taagagagtt ctggcgtca 109

<210> 850  
<211> 391  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-E5

<400> 850

ccacgcgtcc gctccgcctc aaggctctcc tctcggaggt ctgataggca acccaataat 60  
ggcagaagtc ctatcaggat ctcatgaaca ccgtctaagc tctgccttag atggacacta 120  
cgacgagaag aggaaatcca atgtggaata cacagaggac gagaagaaag ccgtgatcgc 180

ggctctgaaa aagaaggctt tgagcgctc acagaagttt aggcattcca tgaaaagggg 240  
gaggaagagc agcaaggatga tgtccatctc gattctggat gagccgtgaa ccttgaggag 300  
tgaaggcttt gatggctttc gccagcctct tgggtcttgaa gagctgctaa catcgagca 360  
tgatgactac cacatgatgc taagatttct c 391

<210> 851  
<211> 421  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-E6

<400> 851

ccacgcgtcc gtatatatct atctatcgcc atcgagcaat tataatctca cagaataata 60  
aacatcatgg ggcaagcctc acggctcgtc ctctctcgcc tegtggcgct gctgtccgcc 120  
ggcctcctcc cgcaggcgct gggtaagggt aggggaggca ggggacacgg tggcgccgctc 180  
aaccgcgagg tcgccggcat ctgctctcgc acccgttcc cggagggtgtg cacgtccacc 240  
gccggggcggc acgcgtccaa gtacccggtc atcgacaacc tggccgtgct gaacatgcag 300  
gtggacgcgt tcgccaagcg caccgcgcag gcgcgcaagc acgtcgcgag gtcggccccgc 360  
accatccccgc cgcagcagac gcatgcgctc acgttctgcg acaccatgta catgaacacg 420  
c 421

<210> 852  
<211> 413  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-005-Q1-E1-E7

<400> 852

ccacgcgtcc ggtactgccc caacaacatc tgcgtcaagt ccggcgctc caaggtggcc 60  
gtcaacgacg tcgtcttcaa gaacatccac ggcacctcca acacgccgga ggccatcacg 120  
ctcaactgcg ccaacaacct gccctgccag ggcgtgcagc tcatcaacgt cgacatcaag 180  
tacaacaggt ccgacaacaa gaccatgtcc gtctgcaaga acgccatcgg caagtccatt 240  
ggcatggcga aggagctcgc ctgcgtctga acctacttgc atccatcact cactcttcgt 300

cacctctctc tttctcactc tcgccagtct ttttttaggc ctctggcaat ctgcgaactt 360

tcttattcat tctactagtg tggatctata attccattca anatatatac atg 413

<210> 853

<211> 415

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-005-Q1-E1-E8

<400> 853

ccacgcgtcc agtgcattgc ttcgggtggtc caccatggcg cagcgagcgg tggccacgat 60

gacgactaat aagccctctc tctctctcgc cctggcggtcc gcgctccttg gtgcggcgcc 120

ggccgcccgc aacgcgcccc gcggggcgtt cagcaactgg gtggcgatga accagcagag 180

ctacgcgtg tacgcgcaga agtccgtcgg ggacgggggc aaggagcccc tggacaagaa 240

gctgtcggag gcggagaaga agaatgtcac gtacgtggtg gaccccagcg gcaagggcga 300

ctacaccaac atcaccgcgg cgtcggagga tatcccgtg agcaacacca agcgcgtgat 360

cctggatctc aagcncggcg ctcaagtccg cgagaagctg ttcctgaaca tcagc 415

<210> 854

<211> 87

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-005-Q1-E1-E9

<400> 854

gtgagtcgta ttaancgtcn tnttcttcgc ttgttggtggc gctggtgctt gtcctgttgt 60

cgatgctggt cgtcctgcta tcggtgg 87

<210> 855

<211> 236

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F11

<400> 855

ccacgcgtcc gatctccatc tctcgcgtct ccttgggtgc cgtgttcacg ccgtcgctag 60  
 cgctgcccgc ggccaagctt ctgccctccc cggcgccggg ctcgggtctt cgtcggccag 120  
 gcagctgcta cgcgtgaaca cggtcacacc agtaccacgt gacgtgaacg gtgaactcgt 180  
 gaagaacaga gccgccactg aggaacccta gcgacggcgg cgtgctaccg gtgaca 236

<210> 856  
 <211> 367  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F2

<400> 856

ggtcgacgcc cgcgtccgga agcaggccga cccgttgctg ggcaagaggt accccgtgaa 60  
 ggggctgttc caggcgctcg ccgtcgcgtc catgtgcttg caggaggacg ctgccagccg 120  
 gccggggatc agcgacgtcg tctcggcgct ctcgttcctc gccgatccgc aatactacc 180  
 tccccaaggc acgggagccg agcagaaggc cacagatcga gagagtaaac ccaacgacaa 240  
 ttctacagac aaggatagca gtcctcataa ggccggaatg atcagggcag acgacgaaac 300  
 gaagcataga tgatgaccgt agggggggaa cgctaacgac gggaattaaa agggaggaac 360  
 actgcag 367

<210> 857  
 <211> 366  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F3

<400> 857

cacgcgtccg cgagttcgac gccaccaccg cgcgggtgct gacgttcgcg gccagcgggg 60  
 aggtcgtggc cacgcacgcc gtcgcgccgg gctcgcgtg cgcgggtgaac ggcacgggtc 120  
 acttcggtat agcgggtgctg ctgcccgaga cgcgcgccgc agcctcggcc gtgagggcca 180  
 ggtggtgggc gtggacggtg ggtgtcggcg cgggtggggg gctgggagcc agcgcttga 240  
 cgctctctgt gggcggcgcg gtgagctgga ccaggatgcc gcgaaggag gagatggatc 300  
 ggcgggcgat ggccggggag gagctgggga ggatgaccgt gcgccggaac aagatgccat 360

cggcga

366

<210> 858  
<211> 424  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-005-Q1-E1-F5  
  
<400> 858

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tctcctgctg tcgctgctgg tcgccgtgct agcgggtggcc gccgatgtcg ccaacgccgg 120  
ccacgccaaag cccctgacgc ctggcggggcg tgtggtacac gacaaccacg gcaagttcac 180  
ggccggggccg tggaaacccg cccacgcgac cttctacggc gggcggggacg ggtccggcac 240  
cacggcgggc gcgtgcgggt acaaggacac gcgcacgcag gggtagggcg tgcagacggt 300  
ggccgtgagc acggtgctgt tcggtgacgg cacggcctgc ggcgggtgct acgacgtgcc 360  
ggtccgtgga cagccctagc ggggtgcaagc ccgacgcggg gggacgggtg gtgacggtga 420  
ccga 424

<210> 859  
<211> 438  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-005-Q1-E1-F6  
  
<400> 859

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tcgtccaca tggtagtctc tcacagcacc ttacagtcaa agagtttgag catctggact 120  
gggctgcgag gatgagggtc atcatgggcg tcgcatactg ctttcaatac atgcaccatg 180  
agctcagtc acctatggcg atccacgacg tgcggtctga cacaaccttc atttcagatg 240  
attatgctgc caagattgca gatgttggtg tatggaacga gcttgctgcc aaagcgaagg 300  
ctggaaagga ggacggcagc agccgtgctg aagctcctcc ggatctccca agcaacgcct 360  
actgcttcgg cgcgctcatg atcgagacca tatccgggag ggttcctgac ccgtatgatc 420  
acaaacccat atgcagct 438

<210> 860  
 <211> 382  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F7

<400> 860

ccacacgtcc acccagcgt ccggaatatg atcctttcac gagaatgatg gtgtttgagt 60  
 tcaactccaca tggtagtctc tcacagcacc ttcacgtcaa agagtttgag catctggact 120  
 gggctgcgac gatgagggtc atcatgggag tcgcatactg ccttcaatac atgcaccatg 180  
 agctcagtcc acctatggcg atccacgacg tgcggtctga cagaaccttc atttcagatg 240  
 attatgctgc caagattgca catgttggtg tatggaacga gcttgctgca aaagcaaagt 300  
 ttggaaacga cgacggcagc acccgttct gaagctctc cggtctctcc attcagcgcc 360  
 tactgcttcg gcgcgctcat ga 382

<210> 861  
 <211> 439  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F8

<400> 861

ccacgcgtcc gaagcaataa cccctctctc ccttcgtcac catcacatcc agccagccaa 60  
 caaaaatgtc gcgcgtcaca gctgcggtgc tcttctacat cctcgccgtt gctgccctca 120  
 gcgcggccga ggccccggca gagtcaccga aggaaggcag tgctgccaaag gcacctgagt 180  
 ctgccaaagag aactgctgcc cccgctgaag caccgaagc cgcattccacc cccgtcgccg 240  
 ccgctgcccc atcgccgtcg tctaggaagt ctggtccagc taccgcgcca gccaccgcct 300  
 ctacaccccc ttcttcacg gacgaggagt tgagcccttc cccgccagca tccaccgccc 360  
 cggcgtcccc tgcggctgag ggaacggctg ctgatgactc cgccggtgct gctgcccttg 420  
 gaagtggagc tgccatcgc 439

<210> 862  
 <211> 257

<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G1

<400> 862

cacgcgtcca cccacgcgtc cgcccacgcg tccgcgcca ccaggatccg cgtggccttg 60  
 ctgagcttgg cgctgggtggg gctgctcatc tgccacctcg ccaccaccgc ctccgcgggc 120  
 aagaacagaa tccgcatact cgacagcgtc gacgactcgg ccggggacaa caacagctcc 180  
 gacgcctcgg ccggggacaa cagcaccgac tccgagtcgg aatgccgcgt cgtcgattcc 240  
 gacatgaagc tggctga 257

<210> 863  
 <211> 415  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G3

<400> 863

gggtcgaccc acgcgtccgc tgggctctgg cctagcctcc actgtctccc agtccccagg 60  
 tcctcatcgg cctccgggtct tctgggtctcc ccagatctcc caccggggaa ccctaccgca 120  
 gcatcagcca tggcgatcgc ggcgcgcgtc ctgcgcgcc tcccgctcca cctctacccc 180  
 tcgctcgctc gctctttctg cgcagtttcc ccggccgccg cctcggccgc cccggcgctcc 240  
 gcctcggccg ccccggcgtc cgccaaaggt cgcgatcgca tcgtgcgcgt cctccccatc 300  
 gatctcgagg gggcgccccg cgaggtcgtc ggcctctccg ggcagacact cctccgcgcg 360  
 ctcggaacg cggagctcac caagccgggc tcccaccggc tcgaggatat cgacg 415

<210> 864  
 <211> 413  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G5

<400> 864

ccacgcgtcc gcatcttcaa agtcatcctc gccaccaaag ggtgaatcaa attcttctcc 60  
 cagtcctcca tcgaaatcgt ccctgtcacc accgccacca ccaaagaaaa gtggtagtag 120

gtctagctct aaagatggga agacgaagaa gtcgtcttca tcgtcttcat cgtcagataa 180  
 tacagccgct gtgatcaccg gcgtgggtgct tgggggtgggtg ggcttcgctc tgctcttgtc 240  
 catcgtggcg tgcgtgtgct ggcgaagaa gaagaagaaa cgtccgcccc caatgaacat 300  
 gcccttctac accgacgaga aaggcaatgt gtattacccc aacgctgggtc tgccgcctat 360  
 gtggcagcaa tatggcagca acggcagcat ccctccgccc ggatggcacc atc 413

<210> 865  
 <211> 218  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G6

<400> 865

cgggtcgacc caaacgtcca cacataccaa atcatcgctc ccatcgcatc gcaacacagg 60  
 gtcttccagg gttcctgcat caatctatct ccagacacca aaggcaacaa tacatcgatc 120  
 tttcaatact tccacctcca tcttcggcat ggccatcaga tctccttcat ccacctcat 180  
 ccacatcata ctcaagccaa ccgttagtaa atgatgtg 218

<210> 866  
 <211> 425  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G7

<400> 866

ccacgcgtcc ggccaggacc aggacgacga tggcccggcc gcgcctcctc ctcaccttcc 60  
 tgctcgccgc ggccggcgtg ctgaccacgg tgcccggtc cgcgctcgcc aagtcgaagc 120  
 tcgccaagaa gagcgacgac gtcgtgaacg ggcccctcct gaccgagaag atccaggcga 180  
 agaagacgct gatcgtgggg ccggacgagg agttcaagac cgtgcagtcc gccatcgacg 240  
 cgggtgcccgc cggcaacgcc gagtgggtca tcgtccacct ccgctctggc ctgcacaagg 300  
 gcaaagttgt gataccggag aacaagccct tcattctcgt gaagggaac ggcaaaggcc 360  
 ggacctccat ctcccacgag tccgcctctt ccgacaacgc ggagtccgcc gcgttcaccg 420  
 tgaac 425



<210> 867  
 <211> 336  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-005-Q1-E1-G8  
  
 <400> 867

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 cgaccccgcc caccgagaca ccgccgatca cgcccagcaa gaagcaggac gacaagccga 120  
 agccggggcc ggatgccgcc accgcggcga actaggcgctc gttgtggctc cgcaagagct 180  
 tcaggcagcg cgctgcccgc gctttccgcc gcaacatgtc gggcgtccgc gtcaggacgg 240  
 tcacggacct cgcccaggaa cgggactcag tgcgcgccgt cagcaacaag gtctccgatg 300  
 aagccgaggg cgctaccgcg gtgcccctg cagggtg 336

<210> 868  
 <211> 380  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-005-Q1-E1-H1  
  
 <400> 868

taccggtcta gaattcacgg gccgaccac gcgtccaccc acgcgtccgc gccagcatcc 60  
 accgccgcgg cgccccctgc ggctgagggc cgggtctgtg atgactccgc cgggtctgct 120  
 gcccttgaa gtggagctgc catcgccggc gttgccgtg ctggttgctac catgatcttc 180  
 ttctactaaa ctacccgacg atggctgtgt cgcggtgaga cattaggggtg gacacgtaat 240  
 tggctgtgct gtaatcgctc tcgtctggtg gggagggagg gaccaagtgt ttctttgctt 300  
 tgctcacttc gtttgctctt gtaacattat ggggtcaacc gttatgtaac taatggattt 360  
 gattaatccg gtctctaaaa 380

<210> 869  
 <211> 457  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations

<223> Clone ID: LIB148-005-Q1-E1-H2

<400> 869

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ggctgctcca tgaaccagcg gctgctgac ctgcgtgtca ccgcgttcgt cgaggagggc 120  
cggagctaca ggggtgaccgt ggacgcgccg agaaagccgg agctggcgcc gcgaggggtac 180  
tacctgttgt tcgtgggtggc gaagggcggtg ccgagcatgg gtgcgtgggt gaaggtccgg 240  
tgagatcgat cagctcacat ccaccgtgtg ggtcgtgtcg ggatcgtgta cacaagtgga 300  
gagccagcct aactctctct ctctctctct gtgtgtgtct ctttgcgttc tttggttttg 360  
ttttcctgct anggatggat ggatgtaa at aggatcgatc agattggcca gttcaccgct 420  
ggatcactct nataggttga ttggatacct gccaca 457

<210> 870

<211> 371

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-H3

<400> 870

ccacgcgtcc accacgcgtc cgccacgcg tccgagcgaa ccaagagagc aggggtgtggg 60  
cgaagagacc ccagccagtc gatcgttcaa gaaaaatacc agcttagcag caacagcagc 120  
agcaagccca cccgttcgac gacatggccc gcctcggcgc cggcgccgtg ttggcgctcc 180  
tattggcggg cgcggcgggt gccgcgttcc tcgcggtgcc ggctcggcg aagtccgggg 240  
aagctaacc caaggggggt gtgggcggca aaggccgga ccgcgccgc ccgcaaaaat 300  
tctcgggcgc ggtgggcgaa tgcgacgttg acgatgcgga ggagctcggg ctgagcggcg 360  
gcggcctcgg c 371

<210> 871

<211> 375

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-H4

<400> 871

acggtctaga atccagggtc gaccacgcg tccatttctt ttcatggcc ttttcagcaa 60  
cagcgatcca ttctcgtagg ggggagagag agagagagag agagggagag aaatcaaaga 120  
ggagagtgat catggagcat gtgatcggag ggaagtataa gcttgggagg aagattggga 180  
gcggatcctt cggagagcta tatctcgtg ttaatatata gaatggagag gaagtgggaa 240  
taaaattggt gcctgtgaaa aaaaaacatc cacagctgca ctatgaatct aaagtttata 300  
tgctgctgca cggtggaac ggtatccac acctcaagtg gtatgggggtt gacggggagt 360  
acaatgttat ggtga 375

<210> 872  
<211> 291  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-H5

<400> 872

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acgtgccagg cgcgcgcgga tgccaccccg cgcggcggcc gcggttcgca ccacgtcccg 180  
cggccgtcca tcagccgggg cacgcagcgg ctctacgtcc gcctcaacac gctccactac 240  
gtgctgacct acctggaggc cctcgacagc tcgctgtcgt cctcgacctc t 291

<210> 873  
<211> 358  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-H7

<400> 873

cccgggtcga cccacgcgtc cgtttcttta aaaaaaaaaa aaaaaaaaaa gaaaaaaaaa 60  
aaaaaaaaa aagggaagaa aaaaaaaaaa gaaaaaaaga ggaaaaaaaa agaaaaaaaa 120  
gaagaaggaa agaacgaaga aaaaaagagg ggagaggaaa gagcgaaaga aagaaagggtg 180  
gggggggagg ggtggggggg aggagctttt ccggggggtt ggtgtcccc gtgtgtgaga 240  
cgtcgggggg ggggggtgtt ggaggggggg ttccgggggg ggcggcgggg gttttggggg 300

ggagagtttg tggccgggtg cctctgggct ggtgtttttg ggggggggtg gcggcgcg 358

<210> 874  
<211> 455  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-H8

<400> 874

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ggacgcgtgg gttcgtcccc gcgtggagaa cgagagacag aaacagggga gcgccccccc 120  
actcctcttc gctgccaaga aaccaccatt cctaacggat ttctaccag tcttctttag 180  
gatttccgat tcggttctcc ggtgagaggg tgggaatttt attttcctcc gctgcaaccg 240  
gtgcaaacat ttogaatccc tccattgcat tcctctcgt gcaatcgggc attcatatgt 300  
tccttggtg cattgaggca tcggtactcg aattttgatg tgagctgacc agacatggct 360  
gcgagagact gctcgggatc acaggatctg ggggggcaca cgttctggcc catgctgtcc 420  
tacgcttgcc gcgagctgtg tgtgatcgta ctgcg 455

<210> 875  
<211> 430  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-H9

<400> 875

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agctgagaag aatcctagct gccacgagag tgaagtatcc aaggccaatg ttcattgatag 120  
cgttctaata acagagcaaa gtgagcgaga gcataatcaa tgcaagggtg aatttgcaaa 180  
cagtcatgtc ccaggaagcc ctgtcactat tccggtcacc gtgtccacta ttgacgggaa 240  
ctctagcaac agtcccaaga agcctgattc tgctgagggt tttctatgat atgttattgt 300  
aaatctagat tgggggtgat gatgatagtt catttcagct ctttctattg gatctgtcat 360  
ccttcttgca taaatagttt tgttcagctc ttcagctaaa tttttcacc tttagtgttg 420  
ctttcgggca 430

<210> 876  
 <211> 399  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A12

<400> 876

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cagggattaa ttagcgccgt gtgcatgcat gcatacggcg ttgggctggc cgacatgatk 180
ataacaatta attaattaat taaggcgaag acacgaagcg tggaggatcg atgcgtcccc 240
gccgccgcag tatgttttaa gctgacttgc ggtagatgtg ttgtggcctg ccggcggcgg 300
cgtccttctg ggtgtctatg acagtctcga aggcgccgac gagcgccttg accctgctgc 360
actggcgctt ctgcatcagc ttggtgcgtg ccgcctcga 399
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<210> 877  
 <211> 360  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A2

<400> 877

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gcccggcgcc aagggcggcc aggcgggtggc ggtgcggctg ttcgggacca agacgcagat 120
ctacaactgc accatcgacg gcggacagga cacgctgtac gaccacaagg gcctgcacta 180
cttcaagggc tgcctcatcc ggggcagcgt cgacttcacg ttcggcttcg gccgcagctt 240
ctacgaggac tgccgcatcg agtcgggtggc caaggaggtg gcggtgctga cggcgcagca 300
gcgttccaag tccatcgagg gcgccatcga caccggcttc tcgttcaaga actgcagcat 360
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<210> 878  
 <211> 281  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A3

<400> 878

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ctctccaatc gcctcccttc gccaaagtcc acggcggtga acctggaaac gggaaaaaaaa 120  
tattccgcac aaagtgcgcg cagtgcctaaa ccgtggatcg aggtagggtcg cacacgcagg 180  
gacccaacct gcactgcctc ttcggtcgtc agtcaggcac caccctcggc tatgcctact 240  
ccacggccaa caagaacatg gccgtcgtct gggaagaggg c 281

<210> 879

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-H6

<400> 879

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caggatccag tgcaaggcca agtgcaccga gcagaagggc atcacggcgc cggccatgaa 120  
ggctctgccag gaggagtgcg acaaggcgta cgtggtgaag gcggccgagg tcaccaaggc 180  
ctgcagcgtc acctgcgcca aggagaagaa cccgcgcctc agcgagaact gcaagaggtc 240  
ctgcacccct cctccttctt gaagcgaagc cccttgaaat gaatgaacca tgcattgcatt 300  
catgcattgta tgcattgcgc ggggtgacgt ggcgttcagc tcaggcgctg agcgagtcta 360  
tacgtacgtc gtcaccggct ggccacgcat gcgataacca tctgatattg acggaactat 420  
ata 423

<210> 880

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-H8

<400> 880

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ctgtttcctt ccattttaac gaagctcccg taaagctcca cttaggccgg attgtcatca 180

atggctatat ttatgacagg gatcgtgcc a gctacactgg gactgtagaa ggcataaggg 240  
cacagacagt cgcgatcggg tcaagggtcc agtcgtccgc acagggctac gccgatcgat 300  
gtcacattac actgtcaacc gatcgtatag acgactgggc attctacggg agttaccaag 360  
ttactaatta cccgcatgag tcttcaactg tcgatgatgg actcgccga 409

<210> 881

<211> 316

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-H4

<400> 881

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gcgtcctgct caccaggaac gtcggcatca gcgacaacct gcgccccgcc aaccgcctcg 180  
gtacacctaa ggacctgccg ctgcccattc gcgcctcgct gctcaaacag ttggactcgg 240  
acgacgacga cgatcagtaa tagcacatcg acgacgacga tcgatatgta atagcacgtc 300  
gtcgacgacc gaccgc 316

<210> 882

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-G10

<400> 882

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tcaaaccaac gtgtcatatg actgtctagc ttatgaatgt tgctcctgtt ttatcacccc 180  
tgaaggccaa gcacacaatc atcctttatt gatgggtcac actggaaact tgagccagcg 240  
tgatcacaca atcgatatac caatgagtga tggatgacc gcatcaacat ctcaccagga 300  
tgatcatagt ggctcggatg agctgcatcg cagcagaggt ccttcgaatg aagtttcacc 360  
aagcccagat acatcttccg gtacaaacga tgtatccaac tctc 404

<210> 883  
 <211> 449  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q2-E1-G4  
  
 <400> 883  
  
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 gggctccgat cgagaacagg gaagcaagag gctgctagag atcgagctca tcaaccaatc 120  
 aagtcgtacg tcgtcagcat cacgcgaccg gatggcgcg cccgcgtcca gctatgtatc 180  
 caggaggggg ctctccgcag cgatgacggg ggcggaggac tccgtgaaga aggtggagga 240  
 caaggcgggtg aagctgggaa ctgtggccaa ggacatcgcc agcgccatgg ccaccacgac 300  
 ggaggagaag acggcggttct gggaacctga ccccgagacc ggatactacc gtccggtcac 360  
 cggcacgaag gaggtggacg ccgccgacct gcgcgccgag atgctcaagc gggggattct 420  
 gcaggacgac tgatgcatgc aacatgcac 449

<210> 884  
 <211> 350  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q2-E1-E3  
  
 <400> 884  
  
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 caccgccgcc atccgagaga acaagccaac cgaccccgtc cccaaggcaa tccgtcgccg 120  
 acgtaccagc gccaccgcag gagcgagatg gagatgaaga ggatcctctt cgccgtcctc 180  
 gtcgtcatcg ccgcctcggc caccgcagtg ctggcctcca ccgaggccgc cgccgcgggc 240  
 gcccgaactg cctccgagtc gtccgccgag gctcccgtg gcgctggcgc tggcgtgcc 300  
 gctggcgccg ccgcccggg gccctccgcc agcagcggcg ggcccgcct 350

<210> 885  
 <211> 426  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB148-066-Q2-E1-E4

<400> 885

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atgcggcggt cgccgtcgag gatgcggcca gtgggaagcc cgcaatgctc tctagcttag 180  
gggggacagg tgaggaagag catgaggaga aggacaatga ggacaagtca ggcgagagcg 240  
aggtgatcaa cccgccagaa gacgctggcg gggaggccac ctcaccctg gaagggtga 300  
agcctcgctt ttccaagggg aatcaaagcc atggacctaa tgctgtcaaa tcaaagagcc 360  
caacgagtgg agacgaaggt cagacgagga aaaaggctcc caattcttct cttcctaaag 420  
caccca 426

<210> 886

<211> 267

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-E6

<400> 886

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tctctatggc ataccctttc ccgtaggtca cggggggggtc cacatttttc ctcaataaat 120  
tatcgctctt ctcccagact cttcatctac gcaatggatt ccaactccgg attaaaccta 180  
ctcatccctt cttacattac ccaaacaac cagatcaaag gctgctccct ctgctaataa 240  
ctcattctac tcttccccat cccttac 267

<210> 887

<211> 272

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F1

<400> 887

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ctgggtggcg ccaggccagc agtggctgcc gatatctcaa aatccggcca tgcaaaaccc 120

ctgacatctg gaggggtgcct ggtacaggac aaggacagaa agttcacagc cggggcatgg 180  
aaaccagcca atccaacatt ctacggagga cgggacggat cagggaccac ggcgaggacg 240  
tgagggtaaa aggacacgcg cgcacaaggg ta 272

<210> 888  
<211> 325  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-066-Q2-E1-F7  
<400> 888

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ggggttacgg cggggccgtg gaaacctgtc gaatcctcct tctgaggaag gcgtaaccga 180  
tccggcagca gcgcggccgc atgcgggtat aacgacaccc gcactcacgg gtaacgcttt 240  
caatcagtga cccctcacca ctgtgctgtt cggtgactgg cgcagcctgc ggatgttcct 300  
accatgtgcg atgcttgac agccc 325

<210> 889  
<211> 336  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-066-Q2-E1-E2  
<400> 889

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ccgggtgcgc gtgcctggcc tttaggaagc tgccgcgggg agggcccggg atcttgggca 180  
aagtgtcat gcaggagtac atctgggaga tcgaccaccg tcagggaag atgaggttca 240  
ggaaggcgaa gtggaggacc catcatctcc aaaccagctc acgctgagac gtctatcata 300  
attagaatgg catttctcc actactgtcg tgcagc 336

<210> 890  
<211> 407  
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-D7

<400> 890

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ctcccaaagt cccccaggc aagaacatca cggccaccta tggcaaggac tggctggacg 120

ctaaagcgac atggtatggc aagccgacgg gtgccgggtcc cgacgataac ggtggcggtc 180

gcggtgtacaa ggacgtgaac aagccccctt tcaatagcat gggcgcatgc ggcaacatcc 240

ccatcttcaa ggatggtctg ggttgtgggt cctgcttcga gatcaagtgc gataagcctg 300

tgggtgtgctc cggcaagccc gtggtggtgc acatcacgga catgaactat gaggctatcg 360

cggcgtagca cttcgattta gcaggcacgg cgttcggccc catggcc 407

<210> 891

<211> 368

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-D9

<400> 891

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cccgccatcg tcggggccgc cgtggcctcc ttcttcgcgt actacattca ctgagccgcc 180

ggacgaggag ccggagccgg agggaagaga ccaaggtggg gggagagact tggctgctct 240

gcgctgctct gctgctcccg cgcattcccg atgcgtgggc gtgctctgat tgggcacggc 300

ggtggcagtg gcacaccttc gtcttccttt tgtttgtttt ttttccttcc tctttctact 360

tgattttc 368

<210> 892

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C9

<400> 892

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 ctttagtgct gacaatactt taagccggcc tatgctagct atactagaat tggttggatc 180  
 ccaagcaatg cattacacat gcatgcattg gaccgtgata tctatttgct accactaccc 240  
 tattacgaca gtgatgctgg cgccaacaat gatgggtgtca tcttccttct ccatcttctt 300  
 catctccata tatagctaga gtgagacttc gctgttggtt aaaagagaag agttaagaaa 360  
 tggattgaca agttaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaagaaa 420  
 aggaaaagaa aaaaaaggaa aggagaacag 450

<210> 893  
 <211> 396  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B12

<400> 893

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 tgccaggagg agtgcgacaa ggcgtacgtg gtgaaggcgg ccgaggtcac caaggcctgc 180  
 agcgtcacct gcgccaagga gaagaacccg cgctcagcg agaactgcaa gaggtcctgc 240  
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 catgtatgca tgcgccgggg tgacgtggcg ttcagctcag gcgctgagcg agtctatacg 360  
 tacgtcgtca ccggctggcc acgcatgca taacca 396

<210> 894  
 <211> 73  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B3

<400> 894

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<210> 895  
<211> 303  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B7

<400> 895

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ctatgtgttg ggggtgggttc ccctctccac atctgttttt acgacttcat gaccaggtc 180  
caacgtgatc tctgctaacc actgtgccta tgcaccctta ccccgactac agacttcaca 240  
tcccactaac cacttgatgc ccctatctca tctgcctatc catgcatcca ttgcattgct 300  
tct 303

<210> 896  
<211> 263  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B8

<400> 896

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ttactccaca taaatatgga ggacttcac atcacgttca atgacatcac tgctaatacag 180  
gtacctttag acccttactt cgatcacaca cttcacatcc catgacttat ttattgctcc 240  
tatatcattt gtctatccat tca 263

<210> 897  
<211> 359  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-066-Q2-E1-B9

<400> 897

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 ccttcacttc gcttcaaate tactggatat gcatcaacgc caccatcagc tggggctaaa 180  
 ggagctgttg atcagaagaa cattaggaga tactacatgg gtactgtacc caatgagagg 240  
 ccaacagtta attactcgta cttgagaaac aatgctcctg caagagcagt tgggtgcaca 300  
 aggaaattgg agttggatta tcagctccca gagactaata accataataa ggtgacaaa 359

<210> 898  
 <211> 413  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C1

<400> 898

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 gctagtggcg gccaccgccc cacaggtagc ggaggcaaag aagaagagag cggcggagag 180  
 cggcgaggcg gcggaggcga agaagatcca ggacgacttc tgctcgacgc tgtgcgaggg 240  
 caagaagggg acggacctgg tcgtgtgcaa ggagtctcgc gcgctctccc agcagtccaa 300  
 cctggtgctg tacggcagga tccagtgcaa gggcaagtgc accgagcaga agggcatcac 360  
 ggcgcgggcc atgaaggtct gccaggagga gtgcgacaag gcgtacgtgg tga 413

<210> 899  
 <211> 373  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C11

<400> 899

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 caggcatcca agaacttcta agtagccact ttccctctc ttcttcatcc tgcataatgcc 180  
 cacaagcaac catgcaaattg ataacatgca tcatgcatgc atattcattc ttctgctcat 240  
 gcactccaat atggtgccgg agttaaaaa atgtaaatca atgtgcaaac tcaaatgaca 300

tcttaaccag ttgtgatcaa tctcaaccgc taatgcattg cacacaccga atgaagctac 360  
catccactgc tgg 373

<210> 900  
<211> 432  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-066-Q2-E1-C4  
  
<400> 900

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aattcgaatt cgaagaagct gataaggtgg cagaatgcta ccctcaaggt taccatgggg 180  
ttgataagga aggcaggcct gtctactttg aacggcttgg acagatcgat gtgaatacgc 240  
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actttgctgt taagttccca gcttgcctca tgcgcgcgaa ccaccatatt gaccagagca 360  
caacaattct tgacgtgcaa ggagtgggga tgaagcagtt cagtaaagct gcaaggggagc 420  
tcattgggat gc 432

<210> 901  
<211> 327  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-066-Q2-E1-A11  
  
<400> 901

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aatagacata cattttatta aatatgcagg gcatcgtaga agagaatggc tctcccttcc 120  
aaaaagcaaa acaaaagaaa ctcgtatagt cgatcgacga ccatgcatca catttccttt 180  
tcctcgatct tctcttattt ccgcagaaaa acaacgaagg aaaccaacc aaggaaacgc 240  
atgctattgc ttaagcatcg ccggaggagc tggtcgatcg ctcgctcact cacgggcctg 300  
attgttccgg tcacctgtcg tcgtcct 327

<210> 902  
 <211> 404  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q2-E1-A12  
  
 <400> 902  
  
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 atgategttg ccgccgtagt gctggacaac aatggcgccg acgcggtctc ctgcactgcc 120  
 atccctagcg taacaataag cctagaggag aaagaaaata tcaatgggga tgttcccacg 180  
 atcacctcgg ccgcaagcaa cgaggaggag gcgttggtca gtgtcggaga atccaccaag 240  
 gacgatggcc atcgcttgac gatggaatgc accactcccg tctcctccag tagcccttcc 300  
 actcgcaaga agcgcggggc gttcagcctc ttcacggcga tgttcctgtc cttcggccgg 360  
 agcgacgaca gcattaagaa gacagaccac gataccacga gccc 404

<210> 903  
 <211> 406  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-066-Q2-E1-A2  
  
 <400> 903  
  
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 gacacctaag ttgtcacctc cacctgctcc tgtgaacttg ccacctccag aagtaaagtc 180  
 ttctccacca gcgacaccag ttagctcgcc accgccagcg cctaagtcac cacctccacc 240  
 tgetcccatg agctcgccac cacctccaga ggtgaagtct cctccaccac cagctccagt 300  
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 cccccctgtg aagtctccac catcaacggc accggtcagc tcacca 406

<210> 904  
 <211> 433  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB148-066-Q2-E1-A3

<400> 904

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atacgccgtg ccacatccgg agccccatct cgacgaccac ctcgacgacc cccacgtgca 180  
cctacaccgg cacctacagg gacagcgaca gggagtgggt caaggggcgg atccccgatcc 240  
ggacgctgat ccagtcggtc gtcccgtcct acatgacctg ctacacgacc agcctgacgc 300  
ggaccatgtc cgcgatcaac tgcgtcaggt accgcttcgg gtcctcagac ccctggacag 360  
tctcccgcaa cgtctagccc cagcagcaca gccgcctctt cagcgcgggc atcaccgtcg 420  
gcacgaccat ccg 433

<210> 905

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-A6

<400> 905

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caaagcagcc aggatcagtt tctcatgtta cagcagctac aatcccacct gcgcaaccac 180  
aaccatcact acaatctctt gcggctagtt caggaccta aatttctggc tcatgtgtcc 240  
ctgtcgacat tgagtggcct cctcgaagaa gctcgtcadc cagcttcaat gcacgcttgt 300  
ctattagcaa ggataatggt tctggaaggc tgtctagcga tggcgttgat gatattgatc 360  
cttttgctga ttgggcccc aatacctaaca atgttaatag catttcagca accgagcatt 420  
ggccaagcat 430

<210> 906

<211> 281

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B1

<400> 906

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ggagacagct ttttgggtgg gtccttgccg catctcatga atgacgctg acaatcctga 120

cgaagtcggt tgaccttcac gtcacacagt ttgagcacga gtcaatagat ggtggacaat 180

gactcaggaa ttctttacac taggatacta aatcgcgggc tgatgcatcg tggcctgcct 240

ctaacaccaa tgcttactcc attgccggac aacaaaaact c 281

<210> 907

<211> 354

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-066-Q1-E1-H12

<400> 907

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aacggagggtc attcttggag actccatgta caagatcata accgacgacg tcttcgaccc 120

caacgagctc ctgcagtcgg tggacctgtc gacggagcac aagatcgtag acctcaagga 180

ccggatcgag gcctccgtcg tcatctggca ccggaagatc agcaacaagc tctcgtgggg 240

gcccgcgggc gtcagcctgg agaagcggga ggagttagag gagcggggcg agancgccct 300

gtcctcctc aagcacaggt tcccggcatc cctcagtcgg cgctcgacat cagc 354

<210> 908

<211> 198

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-A10

<400> 908

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gctatctcgg ttcacaattc ccgtccagaa gacgacgatt agtcagtcgg cagctaggtt 120

cgcacgcgca aggccacgat tgatggcgtc ttcaagtccg agatcacgac actggagatt 180

ccaggcaagc gtagcatc 198

<210> 909  
 <211> 125  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-A12

<400> 909

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 cattgtcgcg gtagtgctgg agcacaacgg ttcctatgcg gtcgcctgca atgccatacc 120  
 tagcg 125

<210> 910  
 <211> 277  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-B10

<400> 910

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 atccacgac acgcttagct cgcacgccat gtgctcgtag gtgacgatac cgcggatcac 120  
 tctgtgtcag gtcacacac aggcatttga cccatccaga ttattcttgc gtcacatc 180  
 atgcttcgcg acggccttca tcgcaagatg gggaaggcgg acagacatcg cctccgtgtt 240  
 ggctccgacg gtgcaattgg gtccacacac gcgggtg 277

<210> 911  
 <211> 110  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-C11

<400> 911

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 ctcgcggctg acaggaagtt cggcgtcacg taccacgcaa ccaggacctt 110

<210> 912  
 <211> 310  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-C12

<400> 912

gctcgtcgta gtctcactca ccccgccctc acgcctcgct catcaaataa ggtcccgccc 60  
ttttccgaca ttcacagggg ggacaggaaa tcagtggcca tggcctcgat tccggcgacg 120  
accttcgccg tcattctatc gtcctctctc ggtgccgcgg ctggcaccgc cgtctataac 180  
gacctccccg actatgtcat tcagcgccgc gtctattgcg acacctgccg cgccgggttc 240  
gtgaccaatg tcaccgagta catcggcggg ggccaagggt agggctggag ttcaagcaac 300  
ttcggcaccg 310

<210> 913

<211> 226

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-D9

<400> 913

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tagctgctc ttcgggtaca ggctgtgggt ccatcgctca gtcaccctgt ctcaaagctc 120  
ccgtccccca gctggcgctc tagagaacct ggctgattcg ctacttggt caaagatctt 180  
cgcagtctca atcgacagtg cgccgcgcct tttccttgcg catta 226

<210> 914

<211> 89

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-E10

<400> 914

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cgccgctccc ggcgttgggt ttgtcgtca 89

<210> 915

<211> 104

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-E9

<400> 915

tgtgacggag tcaacccaaa cttatgtctc atggctgtgc tactcatttt agtgcttcaa 60  
ggcaactgat ttttccacac caagtgctaa cgctcggctt gtgt 104

<210> 916

<211> 345

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-F10

<400> 916

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ccccaagaag agagccatcg cggctgtctga tgacgattgc aagcctgccg atgacgagtc 120  
aacgtcgtgg aagcgctcgc tggacggtat ggcgccgctc cgctccgcg ggcagctgga 180  
gtactaccgc ccgccaccgc cgccaccgcc gctgggccac gccgatgtgt accatgacgt 240  
gatcctcccg ccgccgtcgc aggcacggtt cggcttcgag atcaaggaag ttggcatgac 300  
cagccgctac gcgttcgctg aggatctgca ccagatggac agcga 345

<210> 917

<211> 361

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-F9

<400> 917

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gcactggtac cacttcaccg ccatcgtggt cgccggcatg gggttcttca ccgacgccta 120  
cgacctcttc tgcattctcc tcgtgactaa gctcctcggc cgcattccact acaccgtgga 180  
ggggtcgca acgcccggca gcctcacgcc gcacatgtcc gcgtccgtca acggcgtggt 240  
cttcgtgggc acgctgtcag ggcagctctt cctcggccgg cagggcgaaa agctcggggc 300  
caagaagggt cagggcatgc cgcccatgcc cagggctctc agtttccgtc ccgtcggggc 360  
c 361

<210> 918  
 <211> 340  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q1-E1-G1  
  
 <400> 918  
  
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 gcgtggggcg caacgacggc ggcgtcgtcg cgggcctcgt ggctgtggg atcgtgatgg 120  
 ggaccatgtc caacgccaac aacctgatgc aggacctcaa gacggggtag ctgacgctga 180  
 cctcgccgca caccgtgttc atcagccagg ccatcggcac ggcgtccgg tgcgtccgtc 240  
 aaccggtcat gttctgggct tctacagggg ggtgcagaac ggcgacaccg acgtcttcga 300  
 cgcgccttac gcccgagtgt accgcagcat cgccatgctg 340

<210> 919  
 <211> 363  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q1-E1-G11  
  
 <400> 919  
  
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 ggtgctcctc ctcggtgcgt gccccgagta cggctgcctc gtgtacgagt acatggagca 120  
 cggcagcctc gaggaccggc tgttccgtcg gggcggcacg ccgccgatcc cgtggggcga 180  
 gcggttccgg atcgcggcgg agatcgcgac ggcgtgctg ttctgcacc agacaaagcc 240  
 ggagccgctg gtgcaccggg acctgaagcc ggccaacatc ctgctggacc gcaactacgt 300  
 gagcaagatc agcgacgtcg ggctggcgcg tctggtgccg ccgtcggtgg cggacagcgt 360  
 gac 363

<210> 920  
 <211> 284  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q1-E1-G9

<400> 920

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gctcaacgac tatatcaatg gcaccgcgag gacaaccttt ctgtacccaa gtgctgtcga 120

ccaatttagg aagcaatttg ctcatcttga agaacatagt gggaacggac ctgtgattcc 180

aatggaaaga aaccatactt ctcttcctag gtctactagt gttcactcat cctcaattcc 240

tgtcaaggga caaccccgta tcggcccatg ttcggaaagg cctt 284

<210> 921

<211> 280

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-H1

<400> 921

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gctcgaggaa gttcttggct ggaggttttg tctttacgga gacttcctgg tcatctcttt 120

tgtcaactgc acttgaggat caaccacac ttagtgactg ccttgccctgg tcccatgctg 180

tcagacatta gagttgcca gtgattacac tattacagtg cagctgtagc acatttattt 240

gagcatggtg gatctgtttc tctggcaaca ttccagtaat 280

<210> 922

<211> 166

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-F7

<400> 922

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aaggcaaaac accttcgccg gcgaaaacat ggcgatggcg tgacgtgtcc tggagggtcta 120

actgatgtct cgcaaattac ctcaagaaag tgtctctctt ctcccg 166

<210> 923

<211> 204

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-F8

<400> 923

caggaagacg gcaggagtat gcgcacgtga cggggtgctc ggcaacggcg gtgcgagcca 60

cctgcgtgga ccggacgcgt cgcctctgcc atatccgggg caagatgcac aagaaggtgt 120

ggatcncggg cggggacatc gtcctcgtcg ggctccgca ctaccaggac gacagtgccg 180

acgtcatcct caagtacatg aacg 204

<210> 924

<211> 73

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-G10

<400> 924

aaaaaaaaa taaaataaaa aaaaaaaaaa aaaaaaaaaa aaaaataaaa aaataaatta 60

tggataaaag aaa 73

<210> 925

<211> 295

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-G2

<400> 925

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ccataaaaca gagacgaact tgtgtaggct cactgcagca gagaggaatg aaacgatact 120

gaaccacgca tgagttcaac ataaggtacg caaagacaaa acacagtaat acttcttgat 180

attggtttat gcagttcaca ttcgatttca tcttcgactg ggaaggaatg ggctgcacat 240

ctggtgctgc agcagcgtca nccacgggct acctgaacac gcgggcgagc cgctc 295

<210> 926

<211> 96

<212> DNA



<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-G3

<400> 926

gcgtcggacc agatccggcc agtcgaacga gaatgtcgcg cgccacagct gaggtcctct 60

tctacatcct cgccgtcgac tgccctcagc gcggtc 96

<210> 927

<211> 502

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-G5

<400> 927

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ggaaagatcc atctacagat ttcaggggcg gtgggttttat atctttggag aatttactgt 120

atttctctag gaactatcca aaatccttcc aggagctcct ccgtaagcag aatggtgata 180

gagcattgtg ggaatatccc tttgctgtag ctgggtgtaaa tattacattc atgctgattc 240

agatgcttga ctttcaagca gctaagccaa cgtcgttggt tggagcagtt ttcctaaatc 300

tacgcttata aaatgatcga ncgttcgaca ttctttactg cataaccttc agactgatgg 360

atcagaaatg gcgttaaagt cacgccagtt acatggattt caatacgggt attaaatcaa 420

cacggcgcca gctcgagagg gagctgttgc tagaagatat caagagaatc gaggacatgc 480

catcgtacag gtttctcgcc tg 502

<210> 928

<211> 235

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-G6

<400> 928

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cgccggggcc acgggcgcgg tccgcctcgc cgagagcaa cgccccgcgg gcgtcggccc 120

tgcncaggtt cggcgtgtgg gacgagcaga ccgcttcgtc ggccgcgcaa gggttcacgg 180  
 tgcagttcga gaacgtgaat gcgaaccggg aggtggccac gtccgggggtg ccggc 235

<210> 929  
 <211> 450  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-G7

<400> 929

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 cttcacgtac ctgcgcatgg ggcccgcact gttccagccc gacaactggc gccgcttcgc 180  
 cgcgttcgtc aagcgcataa cggagccggg cgcgcgggag gcgtgccggg agcaggtgga 240  
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 gctcacgagc gtgccggacc gggcggcggt cgcacatcac tgtgttcgat cgctagacgg 360  
 ggtggcacgc tgcgaggact acctgtatgg cgagtccta tacttactca tacataagct 420  
 gcgccgccgt gtcgtcgggt cgtgcaccgc 450

<210> 930  
 <211> 233  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-065-Q1-E1-G8

<400> 930

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 aacgcgcgtc aagaggaagc gcaggagcgc ggcacgtggc gcgcgggcac ggccgcatcg 120  
 gcaagcacag gaagcagccg ggaggtcgcg gtaacgccgg tggcatgcga caccaccgta 180  
 tcctcttcga caagtaccac cggggcgacg tccgcaaggt tggcatgcgt tac 233

<210> 931  
 <211> 247  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-H1

<400> 931

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gtcgcgaggg ctgcctctg gctagattac caccaccca gaatgcagct gaggtctttc 180  
tgattaattt cccaacaagg agtgatttat ggatgtggcg acttgatatt ttcatgccac 240  
atgattt 247

<210> 932

<211> 339

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-H10

<400> 932

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ctccatcggc cccgggacct ccaaggtgaa catcacgac gtgacctgcy gccctggcca 120  
cggcatcagc atcggaagcc taaggcggta caaggacgag aaggacgtca cggacatcaa 180  
cgtcaaggat tgcactctta agaagacgat gttcggcgtc cgcacaaagg cgtacaagga 240  
cgccgcctcc gtgctcaccg tctccaagat ccactacgag aatatcagga tggaggactc 300  
agccaacccc atcttcatcg acatgaatta ctgccccaa 339

<210> 933

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-H12

<400> 933

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tcgtggcggt gttgtctgcc ggcctcttcc cgcaggcggt aggggaacggc aagggaagg 120  
tgcatggcgg cggtgccgct aaccgcgtgg ttgccggcat ctgctctcgc gccccattcc 180  
cagaggtttg cacggccaca gccgggccc atgcatccaa gtaccggctc atcgaccatt 240

tggccgtgct gaacatgcag gtggccgcgt tcgccaagcg cacagcgagc gcgcggaagc 300  
 acgtcgcggt ggcgggccgc actattccac cgccgcaggc acaggccctc agaacctgcg 360  
 acacgatgta catgaacacg caggacgcca tcggcgcggc gcagcgagcc atcgcg 416

<210> 934  
 <211> 248  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-065-Q1-E1-H2  
  
 <400> 934

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 cgtacctgtg cgggctcaac tacacggacg acagcgtgag cagcatcatc taccgggagc 120  
 cgccggtgtc gtgcgccaag ctgtcaaggc tcgaacagga cgacctcaac taccggtcca 180  
 tcaccgtcat cctcaaccag ccgcgcttca gcgcgaaggc caaccgctcc gtcacgaacg 240  
 tcggcgcg 248

<210> 935  
 <211> 165  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-065-Q1-E1-H3  
  
 <400> 935

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 ttcttggtga gcggcgcatg gtgcggctct cgcaaagtcg cgccacgcag agagcatcac 120  
 ggccacctat ggcaacgact ggctggacgc taaagcgaca tggtta 165

<210> 936  
 <211> 79  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-065-Q1-E1-H4  
  
 <400> 936

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cggaanaaga ttctgaac 79

<210> 937  
<211> 325  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-065-Q1-E1-H5

<400> 937

gacaagacca tcgacgggcg cggagcgcag gggcacatcg tgggcgcgca gatcacgctg 60  
cagaacgtgc gcaacgtgat cctccacaac ctgcacgtcc acgacgccgc ggcgcacggc 120  
ggcgggcgca tccgggactc gcagcacgac tggggcggtgc gcgngagag cgacngcgac 180  
ggcgtctccg tgatggngtc agcnatgtct ggatcgacga cctgtcgatg agcagctgcg 240  
cggacgggct ggtggacgcg gtggacggct cgaccgccat cagcgtctcc aacggccact 300  
tcacgaggca cgagcacgtt atgct 325

<210> 938  
<211> 488  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-065-Q1-E1-F5

<400> 938

ccacgcctcg gacggggcaa gcctcacgga tcgtctctct cgccgtcgtg gcgctgctgt 60  
ccgccggact cctctcgag gcacggggta anggtagggg aggcagggga cacggtggcg 120  
ccgtcaatcc gcaagtcgcc ggcatctgct ctgcagccc gttcccggag gtgtgcacgt 180  
ccatcgccgg gcggcacgcg tccaagtacc caggcatcga taacctgacc gtgctgaaca 240  
tgacgtgcg cgcgttcgcc aagcgcacgc cgcaggcgcg gaagcacgtc gcgaggtcgg 300  
cacgcaccag cccgcggcag catacgcagg cgctcacgtt ctgcgacacc atgtacatga 360  
gcacgcagga caccagctac gcggcgagc gggccatcac gttcacggac accggcatcg 420  
ccaagatcat gctgcagctc gccgtcgacg acttcgactc gtgcgaccgc cccttcaccc 480

aggccggc

488

<210> 939  
<211> 371  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-065-Q1-E1-H6  
  
<400> 939

gcccacgcgt ccgaagatga cgatcaagct ctgaaatcac tctcgagcat tgagatgaat 60  
gagcatcagt caaaggaagc atcagtgtct cttatacttg atagcttgga agatctgtca 120  
gagtcagaat tgtcgactat tagaaaacag ctgattgagg aattttcagc agatgacatt 180  
tgtcggggat ctcattttac tgaaacacct tcgaaatctg gagcacaaaa tggaaaactg 240  
caccacaaat ctatggaggt tattccattc ggatttggtt gtggagatgg ggctctcggc 300  
gaagcatctg acagcttagt agaacctcac ttgcgacatc tgcgatgtaa cagcgtttct 360  
gatgttgacc g 371

<210> 940  
<211> 423  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-065-Q1-E1-D2  
  
<400> 940

tccggaagac caccgtcggc cgggcgcgca gtgcaatcag ttcgcgcaga tcacgctgca 60  
aactgcagaa cgtgatcctg caaacctgca catccacgac tccaaggga ctcgggcggc 120  
atgatccgcg actcgaagcg gactacggg ctgcgcacgc ggagcgacgg cgacggcgctc 180  
tccgtgctgt cgtccagcaa cgtgtggatc gaccacctgt ccatgtccag ctgctccgac 240  
gggctgatcg acgtggggaa cgggtcgacg ggcatcaccg tgtccaacag ccacttcacc 300  
gaccacgacc acgttatgct gttcggggcc agcaaggaca gcccgagga cgcggtgatg 360  
caggtcacgg tggcgttcag gcacttcggc cgcgggctgg tgcanccgat gccgcgctgc 420  
cgc 423

<210> 941  
 <211> 285  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-D4

<400> 941

ctttctcgca cctcaacett tctccttttc ttgccacggc aaaacacctt cgccggcgaa 60  
 agcatggcca tggcgtaccg tgtcctggag gtcacgctgg tgtcggcaaa tgacctcaag 120  
 aaagtgtcgc tcttctcgcg gactcgcate tacgccgtgg cttccatctc cggattcgac 180  
 ctccgcatcg cttcgcacag cgaccaagca gaccacagca acggctgcaa cccctgctgg 240  
 aacgccgtgg tacacttccc catcccggtt ggcgctgaca cccgc 285

<210> 942  
 <211> 425  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-D5

<400> 942

ggattccgga tcgaccacgc gtcgggcaat ctgctggcag acacggacct aagccagtac 60  
 aaggatcatg gtaattggat cgagattcta cgcgtggaca accttgtcag cagcggcaag 120  
 ggaaagcgcg acgggcaggg gccagccgtg tggagcaaga actcctgcgt caagaagtac 180  
 gactgcaaga tccttcccaa ctgcgtggtg atggacttcg tgaacaacgg ggaggtgtcc 240  
 gggatcacgc tgctcaactc caggttcttc cacatgaaca tgtacaagtg caaggacatg 300  
 ctgatcaagg acgtcaatgt gagggcgcg cggggaagcc caacagcgac ggcattcaca 360  
 tgggcgactc gtccggggtc acgatcggca agcacgtcat cggcgctcggc gatgactgca 420  
 tctcc 425

<210> 943  
 <211> 417  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-D9

<400> 943

cgggtcggcc acgcgtccgg acaaccgctg cggtcagtgt aggtttctga atcatagctt 60  
ggcgatgcct gaggctagac aaatactgag ctagccttca gaaaaaaaaa gaaaagaaag 120  
agattgagaa gcagggagaa aaaatggcac tggcccattg aggaagcttg agaaccagtt 180  
aacaagaatt gccaacatat tcttggacaa tcttgtaac agagttttaa ggtttcccag 240  
cagagaagag cgcgtgcaac caccacattc atataattaa taagcaaggt ttagagaaga 300  
ggcaacatgg gcacaaagat gaagaagggg atcctgaagc cgttccgcta tatctcaacc 360  
atcatggatg gtaaggaggc tgaaatgcaa aattgggttc cgacggatgt aaaacac 417

<210> 944

<211> 305

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-E1

<400> 944

cgcgtcggcc ggatgcgccg ccagagcaag gccgtcgcgc gcgtccgcct cgtcctcgac 60  
gagaagaagg tctcgcaatt caanggccaa cgatgacgtc tgagataatc catgacgggtg 120  
gcgcggcgaa ctctatcat aaaacctatg ctctctgcca acggagtgac tccatggcct 180  
gtcctgggac acctgtgaga tgacgtgata gagcgagtag tacaactggc ccagcgagcc 240  
atgcagagac gctcgacttg ccacaggccg gggcatatta cgcgatgccc agcagcagat 300  
gtact 305

<210> 945

<211> 241

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-E3

<400> 945

gcgtcggcac acgtgtgcct tttggagacg cgatgtcgtc cggcaacaag atcagcgtgg 60  
ccttgctgag cgtggcccta gtgggcctgc tctctgcca gctgcgcagg agcgctccg 120



cccaacagaa agacatccac gtcctcggca ggcgcgacgg ctccagcgac ngcagcaccc 180  
 cgagtcgaa gccgcgtcgt ctacgcngac atgaagctgg ctgatacgga atcggatgcg 240  
 c 241

<210> 946  
 <211> 372  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-065-Q1-E1-E4

<400> 946

ctgggtgggc cactggcaat ggatcgtctg cggcagtgcc accaagctgg gttttcttct 60  
 gtttgtaacg tgttccgtag actgggacaa ggaggcagtg aangcaacgt acagagtgtt 120  
 agggatcatct ctcccgtag catgaaaaaa atgccagtgt tacatggaaa tcncatttga 180  
 aggcagttga acagaacca gcagagaaag cgtgggaaaa aaactttcta tagtttggga 240  
 catctcaaga tcatagatag ctaccgggaa ggcaagaaga accacgacca gtatttttgg 300  
 attcatctgt actgttaaata tttgtagcac tgcaatgggt tttcaggaaa ttatagtagc 360  
 ttggattgac tc 372

<210> 947  
 <211> 206  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-E5

<400> 947

accacgcctc ggacctacta taacaattgt agatttgctt gctgggcact ctgataaaac 60  
 tagtgatttg catgcgatca aatgtaacgc tcgatgctgc ggtgctacca tgcacgtacc 120  
 atattcgcgt aagtcagatg acaaatcaag tctatatcct gcagactggg cttaccacta 180  
 actacctagt acctcctagc ttgcta 206

<210> 948  
 <211> 114  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-E6

<400> 948

gcgctgctca tctcaatcct cgagaaacgc atgcccacgc gatcgagaga tagcgctcatc 60

gccgactgca acgacgatcg ctacatcctc gatgctcact cccggacaac tatc 114

<210> 949

<211> 369

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-E7

<400> 949

accacgcgtc gggcgcaaag ccaatcaata atcagcagcc acatcaatcc attcgctttc 60

ctctcncgct ccacttccat gggcaagggt cggtccttct tcgcgcgctc ccgcagcggc 120

aagcgcgga gcgcccggag agcaggctcg tctcgcgcgc actcctccgc ggccagcgcg 180

ccgccgtccc cgtccccact cccgaggagg tcacggctcg cgtcgtcaac cacaaccagg 240

gacgagacgg agcgcggtgt ccgcaagttc gacgcnaacg gcgacgggca gatctcgcgg 300

tccgagctgg cggcgctgtt cgagggcggt gggcacgccg tgaccgacga cgaggtgtcg 360

cgcatgatg 369

<210> 950

<211> 246

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-F1

<400> 950

cgcgtcgggc cctcgacttc tatttcaacg tcaaccggca ggtgtcggag cccaggatgt 60

cgtttcgcac gagcacgagc tcagggccgt ctctgtcggg cagcaactcc tcgccaacc 120

tctgcngcac gccagccca ggtagccctg gtgcgcactc gagtaacgcc ttggagtcac 180

ggaagatttg caaccagga gataaccctc tgctgtgtga agacaaggct caggcactgg 240

gctcaa 246

<210> 951  
 <211> 292  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-065-Q1-E1-F2  
  
 <400> 951  
  
 gtcggcctcg ctcatctctg cgcacgtgat agacgcccggt ctccgcctcg gctttcttct 60  
 cctcctcgtg gccgcggcgt tcgcgccgct ggtctccgcg cagctctctg cagagttcta 120  
 caanacgtcg tgccccgacg ccgagaagat catcttgggc gtcgtcgaga agcgggttcaa 180  
 ggcggnaccc ggcaccgccg ccggcctcct ccgcctcgtc ttccacgact gcgtcgcaaa 240  
 cgggtgcgag gcgtcgatct tgatecgagcc catgtcgaac caggcctccg ag 292

<210> 952  
 <211> 246  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-065-Q1-E1-F4  
  
 <400> 952  
  
 gcaaggcgac ggagacgggg atctcctgct gctcgggtgct ggctggagtc ctgcagaccg 60  
 acgcccgtg cctctgcatg gtcgtggacg gcacgccacg tccttcggca tcgccatcaa 120  
 ccagaccagg gcaactggagc tccccggcgt ctgcaaggtc aaggcgccgc cgctcagcca 180  
 gtgcacaggc gtcccgggcg cacctgcacc gacgcctcgc gacgaaccag cagcgggagc 240  
 ggagga 246

<210> 953  
 <211> 313  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-065-Q1-E1-B4  
  
 <400> 953  
  
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gctggggcgc aaggactcgc tgtcgtcgtc gcgcaagagg ccnacgtcga gctgccacac 120  
 gccaaacttca ccgtggaccg cctcatccag atgttcggcg ccaaggggtt cacggtgcaa 180  
 gagctggtgg cgctgtccgg cgcccacacg ctgggcttct cccactgcaa ggagttcgcc 240  
 gaccgcctct agaacttccg cagccagggc gggaagccgg agccgttcga cgccagcatg 300  
 aaccgcctct acg 313

<210> 954  
 <211> 462  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-065-Q1-E1-B5

<400> 954  
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 tccaatacat acatctatct gagccctttc gcgcggtgag gcccgaccgg agtccacaca 120  
 cacacggtgt cgatggcggc cgtaataagg agccgccgcc gcgtgtccgt tttcttctac 180  
 gtcgtcctcg ccgcagctgc agctgcagcc gcggcgcagg catccaataa cgtcacctcg 240  
 gacgaggagt actgggcgga gcgcgccgag gtggctcggg cgcgcaacct cgccgcctag 300  
 gtcagcgacg ccgtggccgc cacgaaccgc ttcaacgcgg acgtgctgag ggccacgacg 360  
 cggcnggcgc tggcgaagta cgatggcccg tgcattggcg ccaaccccat cgaccggtgc 420  
 tggcgctgcc gcgccgactg ggcgacggac cggaagcggc tg 462

<210> 955  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-B6

<400> 955  
 ccacgcgtcc gacaagccct ccacttcaag gaaaacaagc accgttttgg gttcgctaaa 60  
 tcacggctga catatggtaa tattggggga aggttcgtga cagggagaac catttggtga 120  
 ggagtcatat cagaggggtg ccctggaccg gcttcttaag cttgcaagaa tagaagacga 180

tgacctgctg atcatgtcgg acgttgatga aatccccgagc ggccacacaa tcgatctctt 240  
aaggtggtgc gacggcattc cagacatact tcaccttcag ctcaggaatt atctctactc 300  
gttccagttt ttcctggacg acaagagctg gagggcatcg atacacaagt tacaagctgg 360  
aaagacgacc tacgcgcact tccggcagggc agacgagctc ctcgccgatt caggggtggca 420  
ttgc 424

<210> 956  
<211> 400  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-065-Q1-E1-B7

<400> 956

tgcctcacgg ggcaaggggg ctgagctcgc cgcctcgtct cggcctggcc tggttcgccc 60  
tcgctccgac gcgtggtgga cgcagccagt gcgcgacgcc cccggctcct ggtccgttcc 120  
gcagttccgc accccgcttc gaccaaccag gcgccgccgc gtcgcgtcgc gtcgcctcct 180  
tttttttcgc cgcgcgcgcg gacggcggcc tcgtgcgcca gaagaaacct acgcggcagc 240  
cgagatcctc aggtctcggc cgtctgacnc cagctcgacg gccagatgc agtcgcgcgc 300  
gccggccgtc gtgcgcctca gtcctcact ccctcgctc ctcagcggcg agtagagcgg 360  
ccaagcgggc catttttagg cgggagcgcg ggcggcggtg 400

<210> 957  
<211> 442  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-065-Q1-E1-B8

<400> 957

ccacgcgtcg gccgcctctc caccggcacg gtcgcccgga gtagcaagcg tctccgatcc 60  
gatccagcgt gcgagcatat cacggcgatg gagggcagag cggccatgag ctggtactgc 120  
ggctcccttc tggccgtggc catcgcgctg ttctgtccg tgtcgctcgg cgtgcgcgcc 180  
gccggcgccg gcgcggcgt cgacatcagc gtgtcgtgtg cagcgacgcc ggaccgggac 240

gtgtgcctgc ggcgcgctcc acggcggaca gcgactccaa gaccccgcg gacctggcgg 300  
 agggcggcgc tccgcgcggc gaccaccgct gggcgcgcgg cgggcgacta cgcgcggcac 360  
 gagatggacg tggcgaacga caacgacatg tggcagtgcc tgaacgagtt ccccggggga 420  
 gatgaggang cgctggacac ct 442

<210> 958  
 <211> 378  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-065-Q1-E1-B9  
 <400> 958

cgggtcgagg cacgcgtccg acgcggttcc ctccggcggtg caagcgggtg agagatctgg 60  
 ggcaggccgc cgtggtgccc cgaggtgggt gactcatgcc gatgctcccc aagcaccagg 120  
 cacgcagcgg tggttctccc ctaagactga gtgatggcga tgctccagag gcgggcaggc 180  
 aaacagcgac ggcatcccc agtcaaacga gtggcggcgt cgcaccctaa gctcagtggg 240  
 aaccgtgatt gtgcgaggca caataggctt cggcaatgac ggtggtggcc atgggacacg 300  
 cgggtatctc cgacaggcgc gtgacgcgca gtcgtctcca tccgtggtgg ccacatgaag 360  
 cctcgttggc tcccgtgt 378

<210> 959  
 <211> 182  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-065-Q1-E1-C1

<400> 959  
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 aggacgactg ttctcaacgg gcctcttcag cagtccgggg gcagaacanc gcaagtaaac 120  
 aggctcgact catccangca aagggcgcag tacccgagtc gtcacaagt accccgcgcg 180  
 ct 182

<210> 960  
 <211> 432

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-065-Q1-E1-C11  
  
 <400> 960  
  
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 gtggtcgtcg atgcggggcac aggttgcgat ggttgtggcg ttggtgttct tggtagagagg 120  
 cgcattggtgc ggtcctccca aagtcccccc aggcaagaac atcacggcca cctatggcaa 180  
 ggactggctg gacgctaaag cgacatggta tggcaagccg acgggtgccg gtcccgcacga 240  
 taacgggtggc ggctgcgggt acaaggacgt gaacaagccc cccttcaata gcatggggcgc 300  
 atgcggcaac atccccatct tcaaggatgg tctgggttgt gggctctgct tcgagatcaa 360  
 gtgcgataag cctgtggagt gctccggcaa gcccggtgtg gtgcacatca cggacatgaa 420  
 ctatgagcct at 432

<210> 961  
 <211> 395  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-065-Q1-E1-C2  
  
 <400> 961  
  
 gcgtcggggc gaagcgaccc agccaatcga tcgttcagga aaaatacaag cttaccaaca 60  
 acagcagcag caagcccagc cgttcgacga catggcccgc gtcagcgccg gggccgtgtt 120  
 ggcgctccta gtggcggtcg cggcggtggc cgcgttcctc gcggtgcccg cctcggcgag 180  
 atccggggag ctgagcccga tgggttgctg gcgggcgaag gcggcancgg cgcggggccc 240  
 cagaagtcct ccggcgcggt gggcgattgc gacgtggacg aggcggagga gctcgggctg 300  
 agcgggggca gcctcgggtc cggcgacgcg ggtccggcgg acgctggcgc agcgggaagcc 360  
 gaccaaccgg gtcagtangt acgcggcgct gcgcg 395

<210> 962  
 <211> 458  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-065-Q1-E1-C5

<400> 962

accacgcgtc ggccaaggtt gaacataaga aggtgccgcc aactcgtgcc aagtcaccaa 60  
aattgacacg gagaaagagc tgcagtga aa cgcctcagac gccagaggga ggaaatggca 120  
gtgcagtatg ctgccggttg catcgccaca gcattgggaa cgccagagat gttagcagca 180  
aggcacaatg ttctccaaag agcgccctcaa aggctggatc agctactaga tccagggtca 240  
ccaaatccat ggaagacctg aaggcttccg tgaanaaagt gggactgccca agcgccgcga 300  
acttcgctct gcaggcgtga ctcagcaggc agtcactccc atatgccatt tttcatttta 360  
atttatacct cacatcggca ggaagatggg ctctgtgtag ttttgcattg tccttgtaag 420  
aacctggcta ccagagacct gcgctgttcc cgtcctgt 458

<210> 963

<211> 424

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-C7

<400> 963

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acagacatca cgaaggctgt gcaggaggca tggncatcgg cctgcggcgg cactgggaag 120  
cagagaatcc tcatacccaa gggcgacttc cttgtcggac aactcaactt cacaggccct 180  
tgcaagggcg acgtgaccat ccacgtggat ggcagtctgc tggcgaccac ggagctaagc 240  
cagtacaagg accgaggtaa ttggatcgag attctacgcg tggataacct ggtcatcacc 300  
ggcaagggaa gccgttgacg ggcacggccc agctgtgtgg agcaagaact cctgcaccaa 360  
gaggtacgac tgcaagggtc tgctcgactc gctggtgatg gacttcgtga acaacgggga 420  
ggtg 424

<210> 964

<211> 401

<212> DNA

<213> Zea mays



<223> Clone ID: LIB148-065-Q1-E1-C9

<400> 964

gggtcggcca cgcgtccgga ctagacgtgc agcgattctc gatcatgctt gcgaccggct 60  
ggcattttgt cccgacgctc gccgccggtt ggttggatcc gtgccccccc cgatcgatcg 120  
actgtgcgta tggatatgatt gggtagctgt tgccgtgttg gaggtctggc gtccggcgat 180  
ggcacaccac agcggcgcgg cgcggcgcgg cgggcgagcc atggccatga atcgatcggg 240  
tgtccagatc cgggtggaggg aggtccggcc aggcagagcc gcagccagcc tgcgttgcgg 300  
ctgcctgttc gaagtgatcg atcagccgga ggatgccgag gaggtatcag attccgattc 360  
ccggccccag ccgcccccggt gtcctgtgcaa acctgtcctt c 401

<210> 965

<211> 251

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-D1

<400> 965

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acataccaga gatgaggttg ttggttgaat ttgattcgaa gtgctaataga agagaattgt 120  
gagctccggc ccggcgggtgc cgccctcggg gttgtgcatg tagtacgtct ccgagtcctg 180  
tggaccgacg aggcggtcga aatgcgcgcg catgtaagtg agctcgccgt ccgacgggtg 240  
ggacatatcg g 251

<210> 966

<211> 392

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-B2

<400> 966

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cggagggcgc tgaacctctg caagacctac gacctggacg ccgccgacaa cctcngccgc 120  
ctgcaagegc gccatcggct tccgcgacgc cgtcaccatc cgcgccacga tgagcatggt 180

ggcgcaggac acgcagaact gcgaggagga gttcaggaag gccgtctccg aagaacccat 240  
 gggggagcac agcangtcgc tcactnagat gtccgagatc tgccgcacgc tctccaacat 300  
 ggtcgcctac gaacatgtcc attgatttgt ttgtttcctt tccccgacgc cctactacgt 360  
 tcggtagagt cgtcgtcgtc gtcgtcgtcc gg 392

<210> 967  
 <211> 395  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-H2

<400> 967

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 gcgcctccgg caatggcaag acagacagca cgaaggctgt gcaggaggca tgggcatcgg 120  
 cgtgcggcgg cactgggaag cagacaatcc tcatacccaa gggcgacttc cttgtcggac 180  
 aactcaactt cacaggccct tgcaagggcg acgtgaccat ccaggtggat ggcaatctgc 240  
 tggcgaccac ggacctaaagc cagtacaagg accatggtaa ttggatcgag attctacgcg 300  
 tggataacct ggtcatcacc ggcaagggaa accttgacgg gcagggccca gccgtgtgga 360  
 gcaagaactc ctgcaccaag aagtacgact gcaag 395

<210> 968  
 <211> 390  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-H4

<400> 968

gacgcacgag gccacgtggg gacagcgaga ggtgaaccag cagcctcaa taaaagccag 60  
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 cgcgccaacc cgagagaaag atggagatga tcaagaggat cctcatcgcc gcgctcctcg 180  
 tagtcgccgt ctcgccacc gcagtgtgg cctccaccga ggccgccgcc gccggcgccc 240  
 cagccgcctc cgagtcgtcg gcgtccgccg aagccccgc tggcgccgcc ggcgcggcg 300  
 ccggcaccgg caccgcgcg gggccctccg ccagcggcgc cgcgcccgcc ctgcgcgccg 360

cgcccgcgcg gctcctcttc tccctcctcg 390

<210> 969  
<211> 76  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-H8

<400> 969

gaggccgggc ccgtgctgtc catgtgcccg gcgttcgccg agccagcaca tccaaataaa 60

accgagaatt aaatag 76

<210> 970  
<211> 331  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-H9

<400> 970

cacacgcgtc aggcgaagca acagaacgtg aactaaaagg taagaaagag gacagggttta 60

cgagagaacg aagttgaaag aacaaagtgt aacgcggcgt catcatagat atccgaaagg 120

actacagcac caaatataca ccacagagtg taagagaagt cgccgtccgg acaaacgtgc 180

acggtacgcc acgagcaccg caaccactt cagtgtcata tccctcatca gactgaacac 240

gatcctgagt accggttacg gagcgagtcc acgtccggca agagacgggg cccaacgatt 300

cggatttctt caccgatctc ctgaagaggg t 331

<210> 971  
<211> 332  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-A11

<400> 971

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accgtggcgc gggccgcgga ggcgccggct ccgtctccca ccagcggctc ctccgcggtc 180

gcaccccgcca tcgtcggggc cgccgtggcc tccttcctcg cgtaccacag tcaactgagcc 240  
cccggccgag gagccggaac cggaggggaag agaccaaggt ggggggagag acttgggtgc 300  
gcctgcgcgcg ctccgcggct ccgcgcattc cc 332

<210> 972  
<211> 90  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-065-Q1-E1-A2  
<400> 972

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tcgcgcggtc catgatcatg cagctctcgc 90

<210> 973  
<211> 206  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-065-Q1-E1-A4  
<400> 973

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angtgctggt gtctctggag gcgctaaagt tgggtgcgggg cgttgnacga aacggcgggg 120  
agaagtggca aggcgtatac aggaaccggt gccgatgcgg gtgtttccgg tggaaggatc 180  
ggtggcgctg atgctggtgt ctccgg 206

<210> 974  
<211> 343  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-065-Q1-E1-A5  
<400> 974

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agtccgtcga ggccggcaag gcggaggccc gaggcgagta ccaggcgag cagcgggcgc 120

agtgcgtcaa ggacaccgcc ggagccgcgg ccgacagcgc gcagctgcag cagcaccgcg 180  
 ccaccggcac cgttgagcag gtggcgcaga cgggccaacg cgtggcggca ggcgtcaagg 240  
 acacggtggc gggcgccgcg gttggcgtgc acaacacggt cgcgggcgtg cgagcggggc 300  
 tcacgaacac ggtgaccggc gcggtggcgg gcgtcacgaa cac 343

<210> 975  
 <211> 448  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-064-Q1-E1-H10

<400> 975

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 ctgggccttg gtgggccttg ctgggtggtt gccgcagcgg cgcccgtggc caccgcgtac 180  
 ggctgctacg acgactgcta cgagcgtgc gccaaaggga aagaaagacc ccgcctgcac 240  
 caagatgtgc aaccaggcgt gcggctccac ggaccaagge gccggtgccg ccggcgccgc 300  
 gccggcttga tcgccagcg cattcatcgc ttcagctcga tataatcgct gtcctgtag 360  
 caaccacat atgattcgat taatcttct cctctaattt ctgaccccg tcgaattttt 420  
 ttcctttcga ttcctctact aaactact 448

<210> 976  
 <211> 297  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-G10

<400> 976

cgcgggatta ccatcacaa caccgtcatt ggcgtcggcg acaacttcat ctccatcgge 60  
 cccgggatct ccaaggtgag cttcaccgac gtgacctgcg gccctggcca eggcatcage 120  
 atccgatgct tagggttggt cagggaacat caggacttca gggcaagtag catgcaggat 180  
 tgacttctgt taaaacaatc ttctggcttc gtctattggc attagacgta tgcgtcgct 240

ttcacaagtt cacgttgatc cagtacgaca ttgcacttg ttacgtttga cccacgc 297

<210> 977

<211> 443

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-064-Q1-E1-G12

<400> 977

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acgccaggcc gcccggaac attcaagaag gaaggaaccc caaaaacccg gcggcggcaa 120  
caatggctcc gcgcacctca tcggcggcaa cttgcctgtg cctcgctctc gccgcggcca 180  
cgctggcgct ggcccacggg gcccaaggag gaggaccatc ggcacgaggc gcggacctgg 240  
acaaggtcac ggccgagacc ttctcgcaca tcgagatcga cggcaagcct gcaggccgga 300  
tcgtgctggg actgtttggg gacaccgttc ctaaaacagc agagaacttc cgagcacttt 360  
gcacagggga gaaaggaatg gccaaagtcg gcaagcctct atggtacaag gggtcgacgt 420  
tccacaggat catccccggg ttc 443

<210> 978

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-G4

<400> 978

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aagggctctg acacgtacga gccctaag cactcctggg gcgccatctg gaggaaggac 120  
agcgacaaac cgcttaaggg acccctcacc gtccgcctca ctaccgaggg aggcaccaag 180  
tccgtctacg acgatgtcat ccctgccaac tggaaggcca acaccgccta caccgccaaa 240  
taattaactt tagtgctgac aatactttaa gccggcctat gctagctata ctagaattgg 300  
ttggatccca agcaatgcat tacacatgca tgcattggac cgtgatatct atttgctacc 360  
actaccctat tacgacagtg atgctggcgc caacaatgat ggtgtcatcc tcccttctcc 420  
a 421

<210> 979  
 <211> 407  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-G9

<400> 979

cacacgcgtc aaatcgtctt gggggaaaac acatgataga cctaaagaaa gctcaggcct 60  
 gcgcatagga cttttcgaat ctggaagggc ctagccacga aagccatcag ggcctagagg 120  
 agtctcgcac aggtttcgat tgaactccgc tacgaggggc gttacaacgc aacgagagca 180  
 gtctggagag catgggcatt gggctttgac ggagagagga tgggtcaagtc cttcatgacc 240  
 aagggcaacg tcgttgctgt atgtgacaac ttcataaggcc cttgcaaggc cgacgtgacc 300  
 atccaggtgg atggcaatct gctggcgacc acggacctaa gccactacaa ggaacatggt 360  
 aattggatcg agattctacg cgtggataac ctgggtcatca gcggcaa 407

<210> 980  
 <211> 328  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F11

<400> 980

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 cacagcattt taggattgcg ttgacttctg tgcaccatcg cagcagacat atttatattg 120  
 tacgttgagt ataagacatc tgggactcat cattcatccc aaacttcggt cgatggaagt 180  
 cgaaacgtct tatcgttcaa tatgagtata ggggtttgac agcagtctgt tgcattgagta 240  
 cttcgtgttg ataagtctct acatacgtac gtgcatgtat taggacaaac cagtggaaaca 300  
 gtaagtttac gatgtccagg tgaccgtt 328

<210> 981  
 <211> 63  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D8

<400> 981

tctttatcac gccagatgcc atcgcccaag accccgctac ctgggatcac tcccctgcgg 60  
acc 63

<210> 982

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E10

<400> 982

acgcgtcaac acacgcgtcc gaatcctcgt gcacaacttt cttcttctag ccctttgcgc 60  
atatcttgct gtttttgggt tactgaacat gcaaaatacc atcgacgaat tttccctatc 120  
aggcgatctt tccacactaa aagttgcagc agaggattgg tcagacacgt atatcgggga 180  
ctttactaga gagggcgtca aggacagctt tcgacactta tttttgttac acaactcgcc 240  
aggccatgac cagtttttga ctaacgacac ctcaatatct ggctcatcta tagaacctca 300  
ctaagtgcct gagtgggttc cttttcacga tacttcttcg gatatcactg tcagttcggg 360  
caatttcacc agtccccgtg 380

<210> 983

<211> 385

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E11

<400> 983

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ttttcatagt tactagaatt ggaagtgtga tcaaccgctt ttatcagttg acgcatcagg 120  
gatattcacc ctttgggtctc atgggtgctcc atgcagttac gcagagtttg caaggttttc 180  
tatttggact tatttatatt taccacgaaa gagcactagg ggaagtgtgt ctattcattc 240  
gtcgcaagtg gagtcgcaga ggggatgttc gcgaggattc ttttatcgca ttagagaaaa 300  
gaggacttgc tcatttttca caatttgatg aagacgagga ccacgaggac aacatggatt 360  
cgcagagtag ttcccttgca ttttg 385



<210> 984  
 <211> 370  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E2

<400> 984

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acgcgtccaa gggaacgctt acatggtctg atcatgacct acattttgca tgcattccatg   60
gtatctcatc cttgatgatg atctatctca ctagttcttt ttaatttccg cttcatgggc   120
gtttccaaat tcgatttgtgt ttcattccggg tgtgttttagc gggacatctc ttgtctgata   180
ttcctgctaa atacaattgg actcctatat atagaggcct tccggcacat ataatatata   240
tcggaccaac attattgtga tcactaatta tgtctctata tggtgccacg gggataaaaa   300
atTTTTTTTT tttataaata ctgaacgaca cacatcacca tgatatataa aatttacctg   360
gcaaacatta                                     370
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<210> 985  
 <211> 281  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E8

<400> 985

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gtggtgagca accgcgggag acgtgtgtcc cgttgccttt ccttcgcttc gacggcgagg   120
gcacctgttg gcctcgcatg gctctggcgg gggccaagca tcgaagctcc atctcgcccc   180
gctgcccagc gccgcagcgt ctattcaaac ccagatccgc gcgatccccg ccaatcggca   240
atccctgcac cttgcctcac cttatctagc tcagctgcat c                                     281
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<210> 986  
 <211> 340  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E9

<400> 986

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 gggagtcaac ggaacagccg tgggagaaga ccatactgaa tcgcctcccg cccacggatc 120  
 tggcgtctct ggtcagccct ctccctctcc ttcccggggc cattgccggt gcctcgcccg 180  
 ggccgctcgt gctctacaaa cgactacgat gcgcgggtgc gggagctgca gcggcatcgc 240  
 cactggtact tgatgagcac cgcgggtgca ggtccggagg accccgccta cttgcacttg 300  
 tcggtggcgg cgggggatct ttttatcgac gaccacagc 340

<210> 987  
 <211> 365  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F10

<400> 987

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 gtcctccgc ggtcgcacc gccatcgtcg gggccgcggt ggctccttc ttgcgtact 180  
 acattcactg agccgccgga cgaggagccg gagccggagg gaagagacca aggtgggggg 240  
 agagacttgg ctgcgtgcg ctgctctgct gtcgccgcgc attcccgatg cctgggcgtg 300  
 ccctgattgg gcacggccgt ggcagtggca caccttcgtc ttccttttgt ttgttttttt 360  
 tcctt 365

<210> 988  
 <211> 386  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C10

<400> 988

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 tgcaaactca ctgatgacct gtcttctgta tgtgtggaag agacgcttcc cgcagccaac 180  
 ataaccaagt gcagtgcaca agaagactgg aaaaagtgtg tgactgaatt gccccaaaac 240

gattgtcgtt ttgcagtata tgactttgag tatcacactt ctgaatgtgt ttccaagaat 300  
 ataataatat ccattctttg gtcacctgaa actgcgaata ttacgtccac gatgttgtaa 360  
 tcttctatca gagaagctct tgttca 386

<210> 989  
 <211> 452  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-064-Q1-E1-C11  
 <400> 989

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 caagtagaac aacgaccagt cacggaaacc tattgtatgg tctaataatcg gagtgggtgc 120  
 agttcttcaa ctgtttgaag ttactactcg tggacagccg tttgaagtta tcaagacaca 180  
 gcttgctgca aatcgaaagg acagcatgat ttctgctttg aagactatct attctagagg 240  
 aggcatattg ggcttttaac aaggactgat tccctgggca tggattgaag ctagtacgaa 300  
 aggcgggtgc ttatttttgg cgcataatga agcttctacc tttgttgcgt cgttgggatt 360  
 ttctccaacc gtttcagata cggtaggatg tacatttggt ggtgtcgcac aagcttatac 420  
 tactatgggg ttctgtacgt ttatgaaaac cg 452

<210> 990  
 <211> 381  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-064-Q1-E1-C5  
 <400> 990

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 ggtcctcttc tgcacgtgc atggtgagaa ggaagagtca aagggtatcg atgcgaaagc 120  
 gtccgggcct ggtgggtcct tcgacatcac ggggttgggc gcctccggca atggcaagac 180  
 agacagcacg aaggctgtgc aggaggcatg ggcacggcg tgcggcggca ctgggaagca 240  
 gacaatctc ataccaagg gcgacttctt tgtcggacaa ctcaacttca caggcccttg 300  
 caagggtac gtgaccatcc aggtggatgg caatctgctg gcgaccacgg acctaaagcca 360

gtacaaggaa catgggaatt g

381

<210> 991

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D11

<400> 991

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tttggtgtct cgttttgaac ttgtgaataa taaagatgcc tcttgttgca ccattgtttg 120

gaatctcacc aaagacagtt aatcgtgaac ttgagcactg gatgagcaac ctaaatagaag 180

tccaaagtgt gataaatagt gtcgaaacca agttgaatac aactccagcc aagtggaaag 240

ctctctccca acacgtgaaa gaagtctctg aagagttgag tcatattcaa taaggaggat 300

cctcattatg atgttattgt ggcaggagta caagctagta aaaattttga aagtgcagaa 360

gcagacattt ccaaaaacga tggatttaga gaacgagcga tgacaagggt gagaaagtat 420

cgtgacgaaa tcgaatctct tcgt 444

<210> 992

<211> 449

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B9

<400> 992

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gttgcttctt ggacgtatgc cgctataagc aaaacggagt gacaaagttg gaagaaaatg 120

cctcgagcag gtaaagttgt gtctcgctcg gttgtaggag gtgaccgaaa cagaagagaa 180

ccaacactta taaggattgg tcaacctcaa gcttcacta ccgcgaaaag ttcgactagt 240

gccaaaccac atagatatcg tccaggtacg agagcgctga tggaaatacg caagtttcaa 300

aagagtaccg acttgttgat tcgcaagtta ccgtttgcac gtctgggtta ggaaataact 360

cagcactatc atcacgaact tcgctggcaa gtggaggcag tactagccct tcaacaagt 420

gcagaggact acctagttgg tttgttggg 449

<210> 993  
 <211> 186  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B3

<400> 993

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 atgacgcctt gacgaacatg ttccccagtg agaccgagat cgttgtcaaa attcaggtcc 120  
 ttgctgggtgg ccgtgggctg ggatcgtgcg caactgtgct gcacggaggt gtccatgatg 180  
 ttaccg 186

<210> 994  
 <211> 362  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B7

<400> 994

gaaaactagc ttgcagcatg tagcattcaa gtggggctta gcagctatct cacacttctt 60  
 gcctttttaca ctgaattagt ctgtgccaat acgagatact gagggatgaa atagctacga 120  
 aggggaataa caggcgacga atgaaggcaa agaatgcacc tatgataagc aagctaacgt 180  
 ccatagtttg ccagaatgt caggggtactg gaattcacgt caacggagat gaacttgata 240  
 agccaggcat ttctttaaca gagatgtttc tcttcaagat gaaagcaatc tattttcaca 300  
 aatcatggct gaatagacct gaaatgcttg aaaactgttc cactgggcct catttccct 360  
 ca 362

<210> 995  
 <211> 214  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-G7

<400> 995

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ctttcctaaa aaaattttaa taatttccat ctgcattat tttagtagct accattcatg 120  
 ttttctgagt agttgtataa atgctaccac cgatcatctt tgtaccggc cggaacaaac 180  
 gaaaaacaca ctatctatgc tgtgttga attc 214

<210> 996  
 <211> 328  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-063-Q1-E1-G8  
 <400> 996

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 tccagtgact atccacagca gcagcagcag gtctctctcg acgactcagt aggcattggac 120  
 tgctaactgg taatcaacag ctaacctgcg ctctgccact agtgctcga agaaatcctg 180  
 caagtcaacg acttcaagag agcggggctg catttcggcc tcgagcactg caagaacctg 240  
 ctccacagca tcaactctta aagaaccggt taggcggacc tgcacgctgc cctagaccgc 300  
 gctgaacaca tacgtctgct gtacaaca 328

<210> 997  
 <211> 347  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-063-Q1-E1-G9  
 <400> 997

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 aacggctttg acaggtgcga tcccctaacg cactcctggg gcccatctc aggggaaggt 120  
 gaggggcca ccgcttacgg gacctctcac cgtcgggctc actaccagt ggaggacca 180  
 cgtccgtcta ccacgatctc atccctgcca cctggtaatg cgatcaccgc ataccgcc 240  
 caatagttga cttctactgg tgacaatcct ttacgcggc gcatgtctac cactaccaca 300  
 attggttggg tcccacccaa tgcattacac ctgcattcat tggccc 347

<210> 998  
 <211> 351

<212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-063-Q1-E1-H3  
 <400> 998  
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 tctccaacct gtgaaatact cccggcctgg attacccttg ttgggttttg gagaggagat 120  
 tttggacaat gctttgacta aggcagaaaa aaataagatc aatttacatt tgggtggctgc 180  
 agaagaagct cttgcattgt cgatatggac tatggctaca gtttgtcggt ctctgtcttt 240  
 ggaaagtgtg ctaggcttat tcaactggagt tttgctggag aagcaaattg tggtaatatg 300  
 cccaaatctg ggtgttctgt cagcaattct tttgtctatt ataccgatga t 351

<210> 999  
 <211> 428  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
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 <400> 999  
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 agttgagcag cagcaaccac tgcacaagat gtcgtggcag acgtacgtcg atgagcacct 120  
 catgtgcgag atcgaggggc cacacctgag ctctgccgcc atagtcggcc acgacggcgc 180  
 cgtttggggc cagagcaccg cattcccaca gttcaagcca gangagatga ccaacatcat 240  
 taaggacttc gacgagcctg ggtttctggc cccgatcggc ctcttccttg gccccaccaa 300  
 gtacatggtc atccaaggcg agcccggcgc tgtcatccgc gggaagaagg gatctggagg 360  
 cataactgtg aagaagaccg gacaagcgct ggtgatcggc atctacgacg agcccactga 420  
 ccctggac 428

<210> 1000  
 <211> 407  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-063-Q1-E1-H5

<400> 1000

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gtggccgccc atgtcgccaa cgccggccac gccaaagccc tgacgcctgg cgggcgcgtg 120

gtacaccaca accacggcaa gttcacggcc gggccgtgga aaccgcgcca cgcgaccttc 180

tacggcgggc gggacgggtc cggcaccacg gcgggcgcgt gcgggtacaa ggacacgcgc 240

gcgcaggggt atggcgtgca gacgggtggc gtgagcacgg tgctgttcgg tgacgggcgcg 300

gcctgcggcg ggtgctacga ggtgcgctgc gtggacagcc ctagcgggtg caagcccagc 360

gcggcgacac tgggtggtgac ggcgaccgac ctgtgcccg ccaacga 407

<210> 1001

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-H7

<400> 1001

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cacattctcg atgaacacac gtatgtcacg cgacgctcgc agttacagtc ctccacctga 120

ccgctgcaga atggcgaccg ctaagcgtag catacggcat gaatctccat cacatcacia 180

gagccaagga cgacggaaca gtactaaata tactatacga aggtttaact cggtcacaat 240

gacgacaacc aactccatga cgtcttcgga cactagaccc gttcgattag aaattaacgt 300

catttgcgac atctcaagga tcatggatca actgaatgca gctagatata attgtctgcg 360

acgcatcttc tgatacatat aactatacat acgttttgca aa 402

<210> 1002

<211> 407

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-H8

<400> 1002

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ggcgaccacc ggctccctc tccgtcctct agcgaccgac caacgcgtcg agcgaagatg 120



tcgtggcaga cgtacgtgga cgagcacctg atgtgcgaga tcgagggcca ccacctcacg 180  
tcggcggcca tcgtcggcca cgacggcgcc acctgggctc agagcaccgc attccccgag 240  
ttcaagcccg aggagatggc tgccatcatg aaggatttcg acgagccggg gcacctcgcc 300  
ccgaccggcc tgatactggg aggcaccaag tacatggtca tccaaggcga acctggagct 360  
gtcatccgtg gcaagaaggg gatcgggggc atcactgtga agaaaac 407

<210> 1003  
<211> 487  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-G6

<400> 1003

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ggtggccgcg gatgtcgcca acgccggcca cgccaagccc ctgacgcctg gcgggcgcgt 120  
ggtacaccac aaccacggca agttcacggc cggggcgtgg aaaccgccc acgcgacctt 180  
ctacggcggg cgggacgggt ccggcaccac ggccggcgcg tcgggggtaca aggacacgcg 240  
cgcgcagggg tatggcgtgc agacggtggc cgtgagcacg gtgctgttcg gcgacggcgc 300  
ggcctgcggc ggggtgctacg aggtgcgctg cgtggacagc cccagcgggt gcaagcccag 360  
cgcgggcgcg ctggtggtga cggcgaccga cctgtgcccg cccaacgacc agcagtccgc 420  
ggacagcggc gggttggtgc aaccgccgcg ggagcacttc gactcagcat gcccgcgttc 480  
ctccaga 487

<210> 1004  
<211> 391  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-F1

<400> 1004

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aattactaca attttggttt tgaccactat gagatgtcgt ggaggaaagt aggcttttca 120  
ggtctaatta atctactgct ggggcacacg ggccatttg ccagcgggga ttggattcta 180

cctgacctca caatccaagg atccatgaaa ctaaactcta cacttaggac ctttcccaat 240  
acattctact tcagctatgc tacaagaaaa acaagaaaaa tatttggaat tacagttcct 300  
tcaagtgttc ttggagtgc cccattctc tttctgagag tcctccagat gtgtatgtgg 360  
cggcaacctt caaaatgcac ctctgcctta c 391

<210> 1005  
<211> 91  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-063-Q1-E1-F12  
<400> 1005

gacccacgca tccgaccacg cgtccgcca cgcgtccgcg gacgcgtggg cggacgcgtg 60  
ggcagcgatg aaaaaagtta agcgtaacaa a 91

<210> 1006  
<211> 400  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-063-Q1-E1-F3  
<400> 1006

gcgtcggccc aggcgtccgc agaggaggag ataaagatgt tgttacaagc gggcgatata 60  
catggaactg acacattaga ttgtgaggaa tttgtgacag tcttgcttca cattaaaaag 120  
atgagtaatg acgagtatct acctaaagct ttcgagttct tcgacaaaga cgggaatggt 180  
tttattgaaa tgtccgagtt aatggagact ctaagtgatg gtgaactaaa gcctgatgag 240  
caattgggta acgacattat tcaagagggt gacaaggata aggatggtcg catcagttac 300  
ccagagtttg aattgatgat gaaaagtgga tcggactgga ggaacgcctc tagacgttac 360  
tcaacagaga atttcagcag cctcagtcaa aaaactgtgc 400

<210> 1007  
<211> 426  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-063-Q1-E1-F4

<400> 1007

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gcccggcacc gtcgagctcg gctgtggaaa cagaacanac ccatcaacca tggcgaactc 120  
ggcgtcgggg atggccgtga ggcacgagtg caagctcaag ttccaggagc tcaagtogaa 180  
gcgaagcttc cgtttcatca cgttcaagat caacgagcag acgcagcagg tgggtggtgga 240  
caggctgggg cagccggggc acacctacga cgacttcacc ggctccatgc ccgagagcga 300  
gtgccgttac gccgtcttcg acttcgactt caccaccgac gagaactgcc agaagagcaa 360  
gatcttggtc atctcctggt ccccgacac ctcgagggtc aggagcaaga tgctgtacgc 420  
gagctc 426

<210> 1008

<211> 484

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-063-Q1-E1-F5

<400> 1008

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cagcatgttg gaaggtcgtc agtgtcaaca aaccaggatc tgcccttcaa ggacgtagcc 120  
aaccaatgtg aagcacttct gattgggaag cagcaaaagc tatctgcgtg catgagtgtc 180  
tgtgaaaaag aggctggtga atcttccgtc gagcagtcac ctgggcagga tectcaagca 240  
gatacgtttc tctgcacagc tgatgaacaa tggcacccca attcctgtaa gctgccagcg 300  
ctgtgtcnct acgaccggtt ccttgcaacg tctgggtgct aagatgatct cttctgcgat 360  
gtggatctct ataaccaaga acgtgttcag tggacgccta annaattggt ggttccagag 420  
ctcatgcatg ctaaaatatg tgctgtcgtg tgtgagtga gatgacatga tttccctgtt 480  
ttgg 484

<210> 1009

<211> 484

<212> DNA

<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-063-Q1-E1-F6

<400> 1009

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tccttactgg caacctccag gacaatttct ttgccagttt cgctctgggt tggctgatca 120  
ctaattggtgc tggctttgca tcttacccca tcgataccgt ccgcagaagg atgatgatga 180  
catctggtga ggctgtcaag tacaagagct ccttggacgc gttccagcag attcttaaga 240  
aggaagggcc caagtccttg ttcaaggggtg ctgggtgctaa cattcttcgt gccattgctg 300  
gtgctggtgt gctttctggc tatgaccagc tccagatcct cttcttcgga aagaagtacg 360  
gctccggcgg tgcttaaattg gagaaatatg atgacgaaca agagcagtggt gtgttcncgg 420  
tcctttccaa tcanggatct ggtgaagttt ttgcctttca tatcgaagaa attaataatt 480  
catg 484

<210> 1010  
<211> 276  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-F7

<400> 1010

accacgcgtc cgactgtcga cgacggaggg aacagggagg aggagtctgg ctcacatttc 60  
tccttactgt cagctcttca gtatcctttc ttgccattt tcgctctggg taggttgatg 120  
actaatgtta atggctcttg attgtaactc atcgatacct tccgcagtgg gaggatgatg 180  
acatctggta aggctgttaa ttatgcgagg gccttggatc cattccagct gattcttact 240  
atggattggc ccacgtacct gttcaatgct gctagt 276

<210> 1011  
<211> 489  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-063-Q1-E1-F8

<400> 1011

accacgcctc ggccgacgcg ctccgacgtc actgccttgt gggccttacg tgggcctcat 60  
 ggcttaaaat gccatgcccc agcaactaca cgagtcaaca caggcccggc cgggcccggc 120  
 ccggcccaag aacccccatc tctcgattcc tccaacaaat tcccctttcc cttactcccc 180  
 atccccaccc acccagccg acgagcaaac cctagcgagc gagagagccc ggagccgaga 240  
 gaccagccag ccatggcgct gcggtgcctg tacaacgaga tccggagcat gaaggtccgc 300  
 gacgtgccgg cttacctgaa gccgcgcttg acctgngaca acgtcaagaa gagcgccgac 360  
 caggccgtcg accgctacat cgagaagtac atcgacacga gctcgccgga ccctctctna 420  
 cacgtctgca tcggagggat gatcttctcc tacttcgtca atctgccctg ngaagcgcg 480  
 caactcgcc 489

<210> 1012  
 <211> 369  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-G1

<400> 1012

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 cgtcaaaacc acgctgctcg ccaagaacaa ggacttcgag gcgctcatgc gcgtcgccca 120  
 cgcgctcatc aagcggggcca ccggtggcgc cggtgaccgc cggcgccggc gcccgccgcc 180  
 cgcgccaaga ttcattaatt gattattaat tcgttgatta atccgaggag cgccatacat 240  
 atctcgatcc atattgtatt tgtttgttta tagtatatat cgatgtgggg tacgtttata 300  
 tgtacctgcc attgtcattt gattaggtac gttgttgcaa actttttacca cagtatttat 360  
 cttcacatc 369

<210> 1013  
 <211> 264  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-G3

<400> 1013

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gcgctaagac gacgaaggcc tcgttttctc ctctgtgtct gaccatccaa tccaaactca 120  
aaagaacaaa tacgaaagaa gcgtagtgaa ggggaacaaa tgaatggata tatgtaatct 180  
tgagatgcat gccctctcaa atcactgtac tgggtttctc aaaaaaatc attgtaatgg 240  
gagttatata tataacttta tctc 264

<210> 1014  
<211> 445  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D6

<400> 1014

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acacgatcga gctcaaggac agccacgagg aggacatctg ccaggtgggtg ctggtggcca 120  
gcccgcgcaa ggactgcgac gaggtccagg cgctcaggga ccgcgccggc gtcctgctca 180  
ccaggaacgt tggcatctcc gacagcctgc gccccgcaa cccgctaggc tacttcaagg 240  
acgtgccgct ccccgctctgc gccgcgtgc tcaagcagct ggactcggac gacgacgacg 300  
accagtaaac tataccacgg cggcgtcgcg gacatgctgc aaaaaactac aacgatacag 360  
agcgaacgca tggcatggat agcagtatct acggaaagaa aaggaagaaa aggaaaatta 420  
aaaatgtatc agagtgttg attca 445

<210> 1015  
<211> 416  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D7

<400> 1015

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agccgccaat gcagaggaaa aggtcgccac cgccgccgag accacgacga cgggtggaggc 120  
gaagaagaag gacgtcgagg aggccaggaa ggagaagcag gcgcagcaaa gctgaccgac 180  
tgtccgtgca tgcgcgtgcc aactaatata attattggct gatgatacct gatgatcagt 240  
gtgtgatcga gcaaggagac gacacttgaa ttctctacag ttggcatagc ggcataggtc 300

gggagagaca ctctcgactg gccacacat gtaacaaact aaccttcttc gatgtctccc 360  
attatatttcc tccacggagt tcttctgatg aaacaacatg ttctaattgg gcttat 416

<210> 1016  
<211> 542  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-063-Q1-E1-D8  
  
<400> 1016

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agaacaaacc catcaacat gccgaactcg gcgtcgggga tggccgtgag cgacgagtgc 120  
aagctcaagt tccaggagct caagtcgaag cgaagcttcc ggttcacac gttcaagatc 180  
aacgagcaga cgcagcaggt ggtggtggac aggtcggggc agccgggcga cacctacgac 240  
gacttcaccg gctccatgcc cgagagcgag tgccgctacg ccgtcttcga ctctgacttc 300  
accaccgacg agaactgcc gaagagcaag atcttgttca tctctggtc gccggacacc 360  
tcgaggggtca ggagcaagat gctgtacgcg agctccaagg gacggttcaa gagggagctg 420  
gagggcatcc agctggagct gcaggccacc gaccccgagc agatgagcat ggacattgtc 480  
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cc 542

<210> 1017  
<211> 292  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-063-Q1-E1-E1  
  
<400> 1017

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tgcacgtggt cgccgctgat cgcgagccg ggggtcgtct cacgggctat aacgctctgc 120  
cgcagtacga cggtactgag cagactacc tgggtctatag gtcgccgagc gcgccgccga 180  
ggaccggatg gtggccttca cgtacctgcg catgggcccc gacctcttcg acccgacaa 240  
ctgtcggcgc ttgcgtgect tcgtgcgccg catgaacggc gccgggtcgt gc 292

<210> 1018  
 <211> 441  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-063-Q1-E1-E3  
  
 <400> 1018

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ggccccgccc ttttccgaca ttcacagggg ggacaggaaa tcagcggcca tggcctcgat  120
tccggcgacg accttcgccg tcattctatc cgtcctcttc tgtgccgagg ctggcaccgc  180
cgtcgacaac gacctccccg actacgtcat ccagggccgc gtctattgag acacctgccg  240
cgccgggttc gtgaccaatg tcaccgagta catcgccggc gccaaagtga ggctggagtg  300
caagcacttc ggcaccggca agctcgagcg ctccatcgac ggggtgaccg acgggaacgg  360
cacgtacacg atcgagctca aggacagcca cgaggaggac atctgcgnag tggctcttgg  420
ggagagcccc cgcagngact g                                           441
  
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<210> 1019  
 <211> 483  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-063-Q1-E1-E4  
  
 <400> 1019

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cncacgctcc gtctttatct gtaatctgaa gcttacagga acatttgagt ggatcatgga  120
cggattggta ggcctcttga aagtcggggg ggtgaggggc atcaaccttg cctaccgcga  180
cgcaagaagc agcgatccgt atgtcgtcct acgacttggc aagaagaaac ttaagacgag  240
cgtgaagaag agatctgtga accccatctg gcacgaggag ctaactctga cagtcacaga  300
tcccagccta gctctgaagc tggaggtgtt cgacaaggac acgttcagca gggacgaccc  360
gatgggggac gcgagatcg acgtggcgcc gctgggtgaa gcggcgaacg cgagcccgga  420
ggcgagcctg angaacggcg ccatcatcct gtcggtgcgg ccgagcgcca cgaactgcct  480
  
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 <211> 362  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-063-Q1-E1-E5  
  
 <400> 1020

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 ggcgtcatcg acatcagcta cgggagcccc ggcggtaacc tatcactatg acacctcatg 120  
 cattccacaa gtctcagttg gactagattt tgtgcgttaa ccatgtttgt accgcaatta 180  
 tgagtactgc taatgactaa cacaacatca tgcggactaa ggctgtttgt aggtaaagca 240  
 gcagctgtga cagatctcat gacaaatggc cgatgcagga tatgtgctga ctgtcgtgca 300  
 cctgatccga agtggagcat ctactaatat tggagtgttg ctctgcttaa tatgtgcaga 360  
 tg 362

<210> 1021  
 <211> 555  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-063-Q1-E1-E6  
  
 <400> 1021

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 tgggcccgcga cctggctgta cctggcgacg aggcggcagg tgtacgcgga cttcatcgcc 120  
 cacgaggcca tctcgtcgag cgtggccgag ttcagctggg acctcaagtt cccgggcgcg 180  
 caggtgctgc tggccgagtt caacatgacc tcggcgggcg gcgcgcagaa cttcaagtcg 240  
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 accccgggcg gcgtgatcca cctccgcgac ggcgccaact cgcagtacgt gaccagcacg 360  
 gcgttcctgc tgggtggtgta cgcggacctg ctgctgccga cggggcagac ggtgctgtgc 420  
 gggaaacagc cgctgccccg ggccgggtgc acgagttcgc gcggcagcag atggactacc 480  
 tgctggggcg ccaaccgcg gcacagctcc tacgtcttgg gcttcggcgc caaccgccc 540

aagcagccgc acaac

555

<210> 1022  
<211> 414  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-E7

<400> 1022

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ttcatcggcc acgagggccat ctctctcgagc gtggccgact tcagctggga cctcaagttc 120  
ccgggcgcac aggtgctgct ggccgagttc atcatgacct cggctgtcgg cgcgcagaac 180  
ttcaagtcgc aggcgggacaa cttcgtgtgc gcggtgctgc cggacacggc gttccaccag 240  
gtgttcatca ccccgggcgg cgtgatccac ctccgcgacg gcgccaactc gcagtatgtg 300  
accagcaccg cgttcctgct ggtggtgtac gcggacctgc tggctctgac ggggcagacg 360  
gtgctgtgcg ggaaccagcc gttgcccccg gcctgggttc agcagttccc gcgg 414

<210> 1023  
<211> 500  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-063-Q1-E1-E8

<400> 1023

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agaggagggg caggaggagg ccgcaccaaa tctatctggg gatcggagcg cgggcgacaa 120  
gatgccacgc ggcggcaagc ccgcggcttc gtcgaagccg aaccggttcg actcggactc 180  
ggactcggag tccagcaata agccggcgaa caagtccggg gcgtcgtcgt accaggcccc 240  
cgccgacgcc aagaagcggg acaaggacgg gttccgggac tcgggcgggc tggagaacca 300  
gtcgggtgag gagctggagc actacgcggc gtacaaggcc gaggagacga cggacgcgct 360  
cgccggctgc ctgcgcatcg ccgaggacat caggcangac gccagcgaca cgctgatcac 420  
gctgcacaag caggggggagc agatagccgg acgcacgaga aggccgtcga gatcgacagg 480

nactcgcaag agcgagacct

500

<210> 1024

<211> 478

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D5

<400> 1024

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cgacgatggc ccggccgcgc ctctctctca ccttctctgct cgccgcggcg gccgtgctga 120  
ccacggtgcc cggcgctcgc ctgcceaagt cgaagctcgc caagaagagc gacgacgtcg 180  
tgaacggggc cctcttgacc gagaagatcc aggcgaagaa gacgctgata gtggggcccg 240  
acgaggagtt caagaccgtg cagtccgcca tcgacgcggt gcccgccggc aacgccgagt 300  
gggtcatcgt ccacctccgc tctggcctgc acaggggcaa agttgtgata ccggagaaca 360  
agcccttcat ctctgtgagg ggcaacggca aaggccggac ctccatctcc cacgagtccg 420  
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<210> 1025

<211> 360

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-063-Q1-E1-C2

<400> 1025

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ccgtctttat ttgtaatctg aagcttaca gaacatttga gtggatcatg gacggattgg 120  
taggcctctt gaaagtccgg gtggtgaggg gcatcaacct tgctaccgc gacgcaagag 180  
gcagcgatcc gtatgtcgtc ctacgacttg gcaagaagaa acttaagacg agcgtgaaga 240  
agagatctgt gaaccccatc tggcacgaag agctaactct gaccgtcaca gatcccagcc 300  
tagctctgaa gctggagggtg ttcgacaagg acacgttcag caagggacga ccgatggggg 360

<210> 1026

<211> 373

<212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-063-Q1-E1-C4  
  
 <400> 1026

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gtgtcgctct tctcccgga ctcgcatctac gccgtggctt ccatctccgg attcgacctc  180
cgcacccctt cccacagcac ccaagcagac cacagcaacg gctgcaaccc ctgctggaac  240
gccgtggtag acttcnccat cccggctgcc gctgacaccc ggggcctcgc actccacgtg  300
aggctccgcg cccagcgtct atacctgngc gatcgcgaca tcggcgaagt gttttgtgcc  360
atcgacgaac tcc                                                         373
  
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<210> 1027  
 <211> 437  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-063-Q1-E1-C5  
  
 <400> 1027

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accgtcaagg atgtcacctt caagaacatc accggcacct cctccacccc ggaggccgtt  180
agcctgctct gcaactgcaa ggtcccatgc accggcgtca ccatggatga cgtcaacgtc  240
gagtatagcg gcaccaaaa caagaccatg gctatatgca cgaacgcaa gggcagcacc  300
aagggttgcc tcaaggagct tgcattgttc tnagacctcc atcgactgac ccatctctct  360
agttataatt tttctctcgt ccttgcatg cccattagat gctatccatt ggtaacgcac  420
aacagtaaaa cgacaga                                                         437
  
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<210> 1028  
 <211> 382  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-C6

<400> 1028

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atcgagacct cgccgtcgtc cggcaggggt aatttggttc ttctccggcc ggggtgtgcat 120  
ggcaaaacga cccacggtgc ccaagttcgg cacctgggac agcggcgatg ccgggtacac 180  
ggcctacttc gacaaggtgc gcgagaacaa gggcgccacg gcgcccgcgc tgcgccggcc 240  
gcgagcccc aacgaccccc accccgaccg cgagcccag ccagaggagg ggccaatgaa 300  
gagagtcccc ccgccgtcgt cgtccaagcc ggccaacgcc ggagccaccg cgagccgccg 360  
ccgccggagc ggccccacgg gc 382

<210> 1029

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-C8

<400> 1029

cggaattcat ggaacgacca cgcctcggga caagatggcg tgcacagaca atgcgatgag 60  
agccttggtc ctctggtcc tcttctgcat cgtgcatggt gagaaggaag agtcaaaggg 120  
catcgatgcg aaagcgtccg ggcctggtgg gtccttcgac atcaccaagt tgggcgcctc 180  
cggcaatggc aagacagaca gcacgaaggc tgtgcaggag gcatgggcat cggcgtgcgg 240  
cggcactggg aagcagacaa tctcatacc caagggcgac ttccttgctc gacaactcaa 300  
cttcacaggc ctttgcaagg gcgacgtgac catccaagt gatggcaatc tgctggcgag 360  
cacggaccta agccagtaca aggaacatgg taattggatc gagattctac gcgtggataa 420  
cctgggtcatc accggc 436

<210> 1030

<211> 378

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D1

<400> 1030

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ctccagctcg tcgagcgacg aggaagagga ggcgatcgat gagaacggcg agattatcaa 120  
gaggaagaag aagaagatgg gcctcaagga gaagctcaag gagaagctgc cgggccacaa 180  
ggacggccac cacacggccg caccgtctcc ggcgcccgcg cccgtggaga cgcattgccc 240  
ccaccaggag gaagcgcaca ggccgcacgt cgtcccgcacc cgggccccgc cgcctccacc 300  
gcacgtccac cagcagcacc acggcgctcg cgtccaggac gacgtgaaga cggggaaccc 360  
gccgcatgca cccggagg 378

<210> 1031  
<211> 445  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D3

<400> 1031

gcgtcggccc aggctccgc tcacgcatcc gcaacatctg cgtcaagtcc ggcgctcca 60  
aggtggccgt caacgacgtc gtcttcatga acatccacgg cacctccaac acgccggagg 120  
ccatcacgct caactgcgcc aacagactgc catgccaggg cgtgcagctc gtcaacgtcg 180  
acatcaagta caatggatcc ggcaacaata ccatggccgt ctgcaagaat gccatcggca 240  
agtccatcgg cttggcaaag gacctggcgt gcatttgaac caattgacta acatgcatat 300  
attatgtact aggtttgtgc ccgtgcgttg acacggaagt taaaaattac tataacacag 360  
agatacatag cgataagtat cactatgaca ttcacaatcc atgtggcaca atatcactgt 420  
aaccatctat gattgtgcat tgcga 445

<210> 1032  
<211> 458  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-063-Q1-E1-D4

<400> 1032

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ttcttgagta caaagaacgt gatatacaca ctaccggttg cgctcatcct gtactcaacc 120  
 cactagcctg gcaccatcag tcttcatggt tgcaagtgtc ctcaaggaga atagagaaaa 180  
 tctgttacia gaagccagag gactggatga tcttatcagg atattgaacg atgtaaattg 240  
 gaacttagat gctaagaaag cttgcgctgg agcattgaaa cttcacaaaa aatacctgaa 300  
 aaacgtacia gcanagaaac cttaaactg ccatggaaca cacgtcccca atggggctat 360  
 cgttcacatt tcaacataca cgaccatttt ctacacacaa ctttgagtga cgatttatcg 420  
 gacacaggtg gtaatcgtct gacatgtcct gagataca 458

<210> 1033  
 <211> 464  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-063-Q1-E1-A8

<400> 1033

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 ctgtgcaggg cgcgagcgcg ttcgttcggc atggaacaga acgcgggctc gttcctcgcc 120  
 gtgcgtcgcc tctccggtgg cgccatccac caccatcgtc accactcttc cccggctgag 180  
 gtcgtgggcg tgtccactgc gtggctcggg aaggggcttt catgcgtctg cgcgagagg 240  
 agggagagcg acgtgcgcct gtccttcgat ttgagtccca ttcaggaaga gtgcttgaat 300  
 aggttgcaga accggataga ggtgcagtat gatggttcaa atctggagca tcagaaagca 360  
 ctggaagccc ttggcgcttc ctcttttctt ggaactgaac ttctagggtt agtatcagac 420  
 cagtggaagg agatgggatg gcaagggaaa agatcatcta caga 464

<210> 1034  
 <211> 356  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B1

<400> 1034

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 gtcgcaccgg tggctctcgt cgctcgagagg ccacgagcac ggcgagacgc cgcggtgga 120

caacttccgc tcgccgttcg cgcgcggggg ccccgcaaac acgcgcaagt cgtacgccga 180  
cctcagccac atgtccatgc cggactcggc cgacatctcg tttgtcagca gcaccggccg 240  
ccggagcgtc gaccaccacc cggcgatccc gccgcggatg tccaacggct ccgtggacag 300  
ctacgaccac agcttcgaga tgtcacgcac gccagcaag tggggcgggc actcct 356

<210> 1035  
<211> 319  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B2

<400> 1035

gtcggccac gcctccggg agacacgcaa ccgccgatgg cgaagaagca cagggaccca 60  
gcctctgagg ccgcgagcgg cgactccccg gccgcgtcca tccgctccct cttctccgcg 120  
gacaaccgt tccgccgaa ggcctctacg gaggagcccc ccgcgactcc tgcacccgcc 180  
acgacgcccc tccccatgca acccagccgt gacgccaggg atgccgagcc gtcctcgaag 240  
aagaataaga agagcaagga ggatggcccc cggcgcaagc ggaagcggga cgagttggag 300  
gccggccggg agcggcggc 319

<210> 1036  
<211> 432  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-063-Q1-E1-B3

<400> 1036

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ccacagctgc ggtcctcttc tacatcctcg ccgtcgtgct cctcagcgcg gccgaggcac 120  
cggcagagtc accgaaggca ggcagtcttg ccaaggcacc ggccgagtca ccgaaggcag 180  
gcagtctgct agctcctgcc aaggcaccgc agtctgctgc cacgagaact gccccgcta 240  
aggcacctca agccgcctcc acccccgcgc ctgccgctgc cccatcgtcg tcgtcgtcta 300  
ggaagtctgg tccagctgcc gcgccgacca ccgccgcctc tacaccgtct tcttccacgg 360



acgaggagtt gagcccttcg ccgtcggcat ccaccgccga ggtggcgctcn cctgccgctg 420  
atgggcctgc tg 432

<210> 1037  
<211> 294  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-063-Q1-E1-B4

<400> 1037

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aaatcataat gcggcacacg tcgttccggg caagaancat ttgaatagtg tcaggaccct 120  
gttgccatgc tttgcgaaac tgaagctggt catgcgcat gtggatttcg agccatctgg 180  
gtggcgccat catgcataag acatcgaatt gcctcacaac taatggacgt tgcaaagagt 240  
accttctgca tatgcaagac tttggggatt tcacaatctg ctttcgctcg tccg 294

<210> 1038  
<211> 182  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B5

<400> 1038

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tcgccaacgc cggccacgcc aagcccctga cgctggcgg gcgcgtggta caccacaacc 120  
acggcaagtt cacggccggg ccgtggaaac ccgcccaacg cgacttctac ggcggggcggg 180  
ac 182

<210> 1039  
<211> 403  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-063-Q1-E1-B6

<400> 1039

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gttgtcatcg tccgcttcct atatggaact accggtgata aatcaggcgc agacaaagag 120  
accaccaatg accaaaaactc ctaattgcct cctgtaggga tccatcatgc gtgtgttttc 180  
ttctggctgt tgtatctgat gctcaaagta gatgctccgt gtgtcttcgc caaggaaact 240  
gattcccccg accgtcgteg tgatgctgcc cgctcatgct cgtagacggg aatgcctgcc 300  
gcagaatgac gaatangget ggtgtgtgtt atactatgag ggccctcttc gnnccccca 360  
cccgcnegct ggacagcccc agcgggtgca agcccagcgc ggc 403

<210> 1040  
<211> 475  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B7

<400> 1040

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gacactggct atgttggttc cattcggttc gtgcaccacc cactcacct tccaggtcgg 180  
caagggtccc aagcctggcc acctggttct caccctaac attgccacca tctctgacgt 240  
ggagatcaag gagcatggcg gcgacgattt ctcttttaca ctcaaggagg gccagctgg 300  
cacttgacg ctcgacacca aggccccgct caagtacccc ctctgcatcc gctttgctac 360  
caagtctggc ggctaccgta tcgccgatga tgcatcccc gccgatttca aggccggcac 420  
cacctacaag accactctca gcatctgatg agcctgtgat gagtgatgac gaata 475

<210> 1041  
<211> 376  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B8

<400> 1041

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gtcgaaggtc cactgtacat atgccttct cttaccggcg aagttatagg cagccggaat 120

aaggagagct ggctgttgga tcgaagccta caggattcca acgttcggat cggcgccccg 180  
 tccaaattgc aggcatttct ttgccgttcc ctcttctttc ttcaaacgag aacacgcacc 240  
 cattgctggt acagaacatg acataaaaaga ttcagtaaca tgatttgacc gtgtggcatt 300  
 gtggcgccctg caaggccgtg taaaaaaaaa agtaccacct atgcaaacgc tttgctacca 360  
 aatctggcgg ctaccg 376

<210> 1042  
 <211> 539  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-063-Q1-E1-C1

<400> 1042

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 gtcaacgccg ccggtttcgt cgtcncgccg cgcgtcgtgc cggccccgtt cgcgcgtgc 120  
 ctcaccatcg tcttcgagcg cttcaccggc ggctcggcgg ccgcgttcgc cgcgccgcgc 180  
 ctctacgcgc tggcccgccc cgtggccggc tttttcgcgt acgacgcggc ggccggggccc 240  
 gacgccggg tctcgtccg ggcgctcggc gcgcgggtgc gcgtcagatt cgatgacgag 300  
 ctgtcggcgg cggctctgga caaggggttc gacgcggccg ccgcgctgtg cgtgacgttc 360  
 gcggccagcg ggggaggtcg tggccacgta cgcgctcacg tcgggctccg cgtcnacgtg 420  
 cgcggtcacc ggcacggggc acttcggtat aggtgtgcgg ctgcccgaga cgcgcccgcc 480  
 agcctcagcc gggttggtgg gccgtgacgg tgggtgtcgg cgcgggtggg gtgctggga 539

<210> 1043  
 <211> 241  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-062-Q1-E1-E7

<400> 1043

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cccctacaag tgcgcccgan gacgcatcat cgggcagccc ttccacgtcg ccgtcagatg 180  
 ccgatgctgc agtatcgccc gatagtagca gcggtggtgg taccgcctcg aaagagcctt 240  
 c 241

<210> 1044  
 <211> 221  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-062-Q1-E1-E8

<400> 1044

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 tcaccatcgg cgccgcgcgg cgcctgcact acctccacac cgccgccatc tacacgagca 120  
 tccgntcga cgtgtccgcg accacgatcc tgggtggacga caactgggta gccagggttt 180  
 ccgacttcgg cttgtccaag accggcccga cggccatgaa c 221

<210> 1045  
 <211> 101  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-F1

<400> 1045

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<210> 1046  
 <211> 122  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-062-Q1-E1-F3

<400> 1046

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ct

122

<210> 1047  
<211> 256  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-F4

<400> 1047

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actcgtgaac caaatatttg gcacaagtta gctttgcctg tttcttgctg gtacatccct 120  
caaggtttct ccgccacacg cgcttcgggt tcgcgggagc ttgccagatg aatgggtcaaa 180  
ccccgatggg gctcgccgca gtagcattga ggccgtgctg caaccgcctc atctcgtccg 240  
cctcggccgc cgcggc 256

<210> 1048  
<211> 243  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-F5

<400> 1048

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gaagctaagc tcaacaacgt gaccgtcctg ctggtggccc tcctcctcct gagcagtggc 120  
gttcaggacg ctgccgccat gccaggcacg tggaactacg acgcgattgt cgccgacgag 180  
ccaaacggaa agaacaagga cctgtaccgc cccgtcgcca acgccaataa atacacccgc 240  
ggg 243

<210> 1049  
<211> 253  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-F7

<400> 1049

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tctagcgatc gcgtcggcct ccactccacc ttgcgaaaa agcttaccct ttgtgtttgt 120  
 gtgtctgtct ggcaatcgat cgatggccat gagcgaggtc ggcgccgcgc gcacgcctgc 180  
 tcgccatggc gctggcgctc gctgctgc tgctcgtcag gtccgcggac gccgccacgc 240  
 ccggcggtc cgc 253

<210> 1050  
 <211> 118  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-062-Q1-E1-G1  
 <400> 1050

tcgccacgcg tccggccgcc gcaagaagag cagccgcagc tggagcccc gtgtcggcct 60  
 tcatggagat gacgacggat gaggaacggc ggaggggcca cgcggggtgc tgctgctg 118

<210> 1051  
 <211> 241  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-062-Q1-E1-G6  
 <400> 1051

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 ctncgtcgc gaaatccgcc cgccgattaa gcttgcttgc cctagcagat cgaagcccga 120  
 gccctagccc tagccgagga gcgcgcgcga tgggcgtcgc ggtcgtgggc tgaggggccg 180  
 cggctctttg catggcgtga ggaagcggcg tcccagggcg cgggaatgga ccctagcctg 240  
 a 241

<210> 1052  
 <211> 354  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-062-Q1-E1-G8  
 <400> 1052

ccacgcgtcg gcccgacctg ttccagccag acaactggcg ccgcttcgcc gcgttcgtca 60  
agcgcatgac ggagccgggc gcgcgggagg cgtgccggga gcaggtggag cgggaggccg 120  
anggcgtcgc gcacgccacc cagccccctca tgcacgacgc cgccgtcgcg ctenacaact 180  
gaccggaccg gccggcggtc cccgtcgact gtgttcgata gctagacggg gtggcacgct 240  
gcgatgacga cctgtatggc gagtccttat acttactcat acataagctg cgccgcctg 300  
tcgtcngtgc gtgcaccgcg cagtactgtg cgtacagcgg aagctgcgac tgcg 354

<210> 1053  
<211> 134  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-H5

<400> 1053  
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agggcgacaa gtacatcaac tgggcagcga agatggccat ctccaccaac atcggcatac 120  
cgtggatcat gtgc 134

<210> 1054  
<211> 448  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-062-Q1-E1-H6

<400> 1054  
gacgacatgg cccgcacccg cgccggcgcc gtgttggcgc tcctagtggc ggtcgcggcg 60  
gtggccgcgt tcctcgcggt gccggcctcg gcgaagtccg gggagctgag cgcgatgggg 120  
ttgctggcgg cgaagggcgg cagcggcgcg ggcccgcaga agtgctcggg cgcggtgggc 180  
gagtgcgacg tggacgaagc ggaggagctc gggctgagcg gcggcggcct cggctccgac 240  
gacgcggtgc ggcggacgct ggcgcagcgg aagccgagca accggtacat cagctacgcg 300  
gcgctgcgcg cggacgaagt gccgtgcaac aagcgcggcc ggtcctacta cagcaactgc 360  
gaggcncaga aggccgccaa cccctacgcg cgcggtgct cgccatcacg cgctgcgccc 420  
gcaacatgaa ctgagcccag cgctagct 448

<210> 1055  
 <211> 254  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-062-Q1-E1-H7

<400> 1055

ggaatatccg ggatgaccac gcgtcggaca acatgcccc ggcataccgc aggtggtcat 60  
 cgtcacgggc ctcacctggc tctcctggtt cnccttcac ctcttcgaca ccgactggat 120  
 gggccgcgag atgtagcacg gcaggccccg cggcagcccc gangacgtgg ccaggttcca 180  
 ggangggctc cggcangggc ccttcngcct gtcctcaac tccgtcgtcc tcggagccag 240  
 ctcttcctc atcg 254

<210> 1056  
 <211> 95  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-H8

<400> 1056

ggcctgccgg tgagcgacga gtgcaaggtg aagttccggg atctgaaggc gcggcggagc 60  
 ttccggttca tcgtgttcag gatcgacgac aagga 95

<210> 1057  
 <211> 411  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A1

<400> 1057

ggaattccgg gacgaccacg cgtgcgccat tacagcaatg gcggacaagg tgttctcct 60  
 cctccgactc agcatggtcg ccgtcgtcct ggctgccatc gccacagtag tgctcgcgga 120  
 ggaagccgat ccgcgggcac tgccggcaca gtggaccacc gcgaagaagt acaaggccac 180  
 gatggacgcc aagacgcggc aggctttcga cggcgtggtg gccgccgcta cggcagagaa 240



gcgggtcccag gcgggtggagg ccgtgctgca gcagcagctg aacatggacg tgtccctgtc 300  
 caaggcgacg tcttccgggg acgagaacaa ctacgtgagc gtggccgccc cctacgagaa 360  
 ggccgcgggg gccgtcatcg cggcgacgcc ggacaacaag ctccgcgcta t 411

<210> 1058  
 <211> 247  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A3

<400> 1058

tgaacaaaga gaagtagcca caagcatgtc tggcatcatc gacaagatcc aggagacgct 60  
 ccacatcggg ggcgaccaca aggaggagca cgagcacaag aagggcgagg agcaccacaa 120  
 gaagggcgag gagcaccaca agaaggacga cggggagcac aaggagggca tcgtggagaa 180  
 gatcaaggac aagatcaccc gccagcacgg cgacaagtcc ggcgaccaca aggacaaaga 240  
 ccataag 247

<210> 1059  
 <211> 260  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-062-Q1-E1-E6

<400> 1059

accaccgtcg acacatccgc atgaaggacg tcaagtgcgg ccggggccacg catcagctcg 60  
 gccctgngg cgttacaagg acgagaagga cgtggaggac gtgaaggtga cggggtgcac 120  
 gctcgccggc accacgaagg gccggcgcat caagtcgtac gaggactcca agtcgtcgct 180  
 cagggccagc aagttcctgt accaggacgt caccatggac aacgtctcct aaccatcat 240  
 cagtagacag aagtactgcc 260

<210> 1060  
 <211> 407  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-063-Q1-E1-A4

<400> 1060

cgcgctcgga caatttctac gattcaaagc tagcaacaca gcatataaga ctgatgtcga 60  
ccggattgtc ataactccag ctggcccatc aggcccatct tctcctcagt ctgaagctgg 120  
ggagtccaat gtgtttcacc aggaaaaaga tgctgcagca gatggggcac cgctgacac 180  
tgatggagca gtggctgagg ccggagagga agaaacaacg gaaaatgttg gtgaagcgac 240  
atttagctat gaccgcttga tatccaaatc caccgatcca gttcgtggga tagattacaa 300  
acgcagagag gcatacttat cagatagtga attccaaact gtntttggca tgacaaagga 360  
tgcattctac cgacagccaa attggaacca ggaactacag aaccaaaa 407

<210> 1061

<211> 374

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A5

<400> 1061

gagaaccatg tggtcgtcga tgcgggcaca ggttgcgatg gttgtggcgt tgggtgttctt 60  
ggtgagagggc gcatggtgcg gtcctcccaa agtcccccca ggcaagaaca tcacggccac 120  
ctatggcaag gactggctgg acgctaaagc gacatggtat ggcaagccga cgggtgccgg 180  
tcccgacgat aacggtggcg gctgcgggta caaggacgtg aacaagcccc ccttcaatag 240  
catgggcgca tgcggcaaca tccccatctt caaggatggt ctgggttgtg ggtcctgctt 300  
cgagatcaag tgcgataagc ctgtggagtg ctccggcaag cccgtgggtg tgacatcac 360  
ggacatgaac tatg 374

<210> 1062

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A6

<400> 1062

ggaattcacg gaacgaccac gcgtcggcca cggaggccaa ttctccaact tctcctctcc 60

gtcgatcatc cagcaccagc atgagaatcc cgtcgaatcc ccctctcaac caagggcgcg 120  
cgcgcggtgcg tatgcctcct ccagatccaa agcaacagac agcgagggggg caccgggggtc 180  
cgccgcatgt ttgcgattta tggaggatca tgctttcttg ctactacat tagctcctga 240  
cgcgccgccc tcccctcgcg ttcattgatt tctgttataa ttactaccga gctactatct 300  
ccacattatt attggtaaag aaagaaaggg cgctcctct aacttgatgg gcaatccgtt 360  
tccatctcaa cttcaacgcc aacaacagtt gatgctacta tggttggaaa tcgggcatgg 420  
tt 422

<210> 1063  
<211> 422  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H6

<400> 1063

acacgtccga acacagttga gcgcgacgat gggatccctc gctaataaca tcatggtcgt 60  
gggtgtcgtc cttgcagcgc tcgtcgccgg cgggtcatgc gggccccga aggtgccgcc 120  
cgggtccaac atcaccacca actacaacgg caagtggctc accgccaggg ccacctggta 180  
cggtcagccc aacggtgccg gcgctcctga caacggcggt gcgtgcggga tcaagaacgt 240  
gaacctgcca ccctacagcg gcatgacggc gtgcggcaac gtccccatct tcaaggacgg 300  
caagggctgc ggctcatgct acgaggtgag atgcaaggaa aaacctgagt gctcgggcaa 360  
tccagtcacg gtgtacatca ctgacatgaa ctacgagcct atcgctccct accacttcga 420  
ct 422

<210> 1064  
<211> 418  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H8

<400> 1064

acgcgtccgc agcaatggag ctggtctggg tctgttgcaa cgaggattc cgatgatttc 60  
gaggttgcaa ctaattgctc gttagagctg gactgcgtga ggccatctag tgccccaaaa 120

gcttcaggtt tatcaaatgg aggggggcaca gctgtaaaaa agatccaagt caaggggttca 180  
aaaggttcag acgttagggg agtgaatcct ggaaaaaggt catcgccatt acagaagaag 240  
ccgagtggac cctcaccgac gctaatacaag aagggcggag gtgaaggaag gaagactcca 300  
aatggtaaaa caggaaccaa gaagtaagca acccagatga aacttggttt tgctgtgacc 360  
aacttcacct tggttaggga cagataaaca tgttgatact accgggtgat acattgat 418

<210> 1065  
<211> 371  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-062-Q1-E1-A1

<400> 1065

acgcgtcggc ccacgcgtcc gccacgcat cggccagatg ctgtcgaagc tgcggcaccg 60  
gcacctggtg tccctgatcg gctactgcca cgagaacgag gagatgatcc tgggtgtacga 120  
gtacatgcac aacggcgtgt tccngaacga ggtcgacggc agcgagggga aggcgccgct 180  
gccgtggaag cagcggctgg agatctgcat cggcgtgcc cgggggctgc actacctgca 240  
cacgggcacg gcgcaaggga tcatccacgg cgacgtgaag acgaccaaca tcctgcggga 300  
ggagaacttc gtggccaagg tgtccgactt cgggctgtcc aaagacgggc ccgggatgaa 360  
ccagctgcac g 371

<210> 1066  
<211> 340  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-062-Q1-E1-A3

<400> 1066

attgatgata ttggtgctcc gatcatgaga agcacagtgg ggtgtagtcg attggcccca 60  
gttcgcgaag agatgcagat gagagcagga gactctgcag cttattgcan ctgcggctat 120  
gactttgtgg tggtggacaa aacagttgac tatggctcag gaggatcacc gtcagataaa 180  
agcagtgcctt cagaagtaag aactcatgtt cggccactgg atgctagcac agcagccac 240

gtggcaggtc cctcaagtaa gaggcgagct acanttgtgc ctgaagaggt ttcngatgaa 300  
cgagtgttcc gtcgctttgt cagactactt ctggccttca 340

<210> 1067  
<211> 342  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-062-Q1-E1-A6

<400> 1067

accacgcgtc gcgcgcgacg cgtgggcgag ccacaccgac gcgacgattc ctctcctccg 60  
cccgttccca ccgatctcac gctctctctc ttctctccgtc gcgtcggcgt cgccatcgcc 120  
ggccatgggt tgcggtggct ccaaaggagg cgtgngcacc ggcaacacca gcgccggcag 180  
caaggtcctc cggaggaagt cctcctccgt ctccaccggc gcaagccaca cctccaccac 240  
gtcgccgtca gcctccggcg tcgtcgtcaa ggacgtcgtg aaggatgcng cggcggcccg 300  
cgaagtgatg acgcccggcg acgccgagaa gcctatctct gt 342

<210> 1068  
<211> 71  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-B1

<400> 1068

gcgatcgccc catggccgcc atggctcgtt ccgtctccct cgtcgtggcg ccctgctcc 60  
tcctctccct c 71

<210> 1069  
<211> 229  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-062-Q1-E1-B3

<400> 1069

agatgctgct ggagcaagcg acacatcctg tcgggcgcca cgtccgtgtt cggcgcggcg 60

ccggtggagg tctccgtgaa ngtggccggc atccactggc actacggcag ccggtcgcac 120  
 gcccccgagc tcaccgcggg ctagtacaac aggcggcgcc acgacgggta cctcacgata 180  
 gcgcgcgtcc tgtcgcgcca cggcgcctg ctcaacttca cctgcgtgg 229

<210> 1070  
 <211> 87  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-062-Q1-E1-B6

<400> 1070

accacgcgtc ggcccacgcg tcngacgacg tatcttcatac tacgtacatt caactatact 60  
 atatgtcgca tactaaatat tctgtct 87

<210> 1071  
 <211> 356  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-062-Q1-E1-B7

<400> 1071

cgctccatc gcatcccgcg gccgcgtct cgacggtcgc taataagccg ccgcatccac 60  
 ggatggagat gaagaagatc gcttgcgcgc tctcgtcgc cgccggggcc acgctggcg 120  
 ctggccgcgg aggcccggt cgtctcgca ccagcggtc ctccggggtc gcagccgcca 180  
 tcttcggggc cgccgtggcc tctttcttcg cgtacgacat tcaactgagcc gccggacgac 240  
 gagccgcagc ctgacgtagg agaccagngt gnggggagag acgtgggtgc gctgcacggc 300  
 tctgtgtctc tcgcgcattc ccgacgcctg ggcgtgtct gattgggcac ggcggt 356

<210> 1072  
 <211> 356  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-062-Q1-E1-C3

<400> 1072

atggacgata cataagagaa gcacgccgac ctcgatcaag agtgaggaga gcgaggagcc 60  
gaagctactg acctacgagc aagaagctcc agaggaaccc gaaaatgctg tggaagagga 120  
gaaagaagaa ctgagtcgaa gagcagaacc tcagcctgtg cctgatccag aacccaccc 180  
acagcanacg actggagatc tactaaacct ggaagcagag gtgaatcctt cggctctgga 240  
actcgaacaa agcaatgcat tggcactcac tattgtagca tcatgtgact acaagccgcc 300  
agcatctcaa agtatgtctg atgtcaattc ctctgggtgg gagctggcac tgggtca 356

<210> 1073  
<211> 237  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-062-Q1-E1-C5

<400> 1073  
gcgagggcct gctgccaggg tgtctggcgc caggcgactc tgccgtcgct cccggcgctc 60  
atcttggtgc cgccggccac caccatctcc acgcaccaca cctccggcgc cgtctagcag 120  
cncaggacgc cgccggcgat ctccggcgccg ccgtggacca cgcccaccat tcccgctcctg 180  
caggctctct gccctgctt ggctcgtcgac gacgacgacc tcgtcctcat cagcacc 237

<210> 1074  
<211> 211  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-062-Q1-E1-C6

<400> 1074  
cgtcgctgct agtgctgcc gttgaactct ccggccacca ttgatccgac ctgcctaaag 60  
ccatctatga gtagagaaaa acagtgaacg ccacctctgt actcgccccg acgtatggcg 120  
cgtcgctcct gcagtaccgg cccacgctct gcgcggtgct caagtgttac ggctgccttc 180  
aaatccgtcg tcggaccatt ggcactgggg c 211

<210> 1075  
<211> 379  
<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-062-Q1-E1-C7

<400> 1075

gcgtccgagg cgggtgcagcc gcgactgggc gcgcgaccgc aagcgctgg ccaggtgcgc 60

catgggcttc ggccacagga ccaccggcgg gctggccggc aagtgcgacg tggtcattga 120

cgccancgac gacgccgagg acctcgtcac cccaggaag ggcacgctcc ggcacgccgt 180

gacccgggcc cgggcgctgt ggatcacctt cgcgcgcgac atggtgatcg agctcgcca 240

ggagctcatc gtgagcagcc acaggagcat cgacggccgc tgagcgcatg tgcacatcgt 300

gggcgcgcag atcacgctgc agaacgtgcg caacgtgatc ctccacaacc tgcacgtcga 360

cgacgccgcg gcgcacggc 379

<210> 1076

<211> 271

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-062-Q1-E1-C8

<400> 1076

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tcctccgaca tccacaaggg gggaggggaa aacacgtaca ttcaccgggc ggcaataatg 120

gcctcggttc cggctccggc gacgaggacc gcggcgtca tcctatgcct atgcgtcgtc 180

ctctcctgtg ccgcgggtga cgacncgaac ctncgcgact acgtcatcca aggccgcgtg 240

tactgcgaca cctgccgcgc cgggttcgtg a 271

<210> 1077

<211> 330

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-062-Q1-E1-D1

<400> 1077

gtccgctcga caacgagaac cgacatcgct catggangcc cggactctga atcctcatct 60



caccttcacc tgcgcactg tcagcgggag gttcatcttg caacattgca ttgcacagcg 120  
 cgcacggcgc tcgnaacctt cagaagtgcg agcattgcgg agatatgggt gccacgaagc 180  
 ttatggatga gcaactacgat gagaaacatg ctccgatgaa ttgctcacgt tgcaaacaca 240  
 cagtaggaac gcgagctatc ggatcttcac acaggcatac aatgcccaca aaggatgctc 300  
 gcgtgccagt actgtcagtt tgaactgcct 330

<210> 1078  
 <211> 229  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-D6

<400> 1078

gaccggagat ctagaggaac caagtgtact gcaacggcga gctgggtgctg gtgacggggg 60  
 gcaccaagcc ggagtacacg gtggacgtgt ggtccggaaa ccaccctac tatgtcggcg 120  
 acacctcggc gctcagtggc atggacagcc agatcgagaa gttccgcaag aagtggggcc 180  
 acatcaagga gtactggccc gaggaacagt ggagggagat gcaccaga 229

<210> 1079  
 <211> 360  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-D7

<400> 1079

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 gcatgtcatc catcagaagc aggtactagt gactgccagc tggtttaact ccaagtcagg 180  
 aaagaagatt cctttgaaat cagtcacttc aatcgctgat gggctaaaga aatcgtaacat 240  
 tgagaagttg aggcccttgg aaaaaacgta tcagttccat gacttcgtct cgcgcttgct 300  
 gactagcagc gatttcgatg cgaaaccaat ggtcatgctg ttgggtcaat actccacggg 360

<210> 1080  
 <211> 303

<212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-062-Q1-E1-D8  
  
 <400> 1080  
  
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 ctcataggca atggcaaccg caaggaagga tcctcagcag gttgagaaag tcaacctgaa 180  
 naccaacgag tctggcaaag gggtagtacg gcgtgcaagg tctgtcnncg actctccgga 240  
 tcgcagatcg tccccatccc cgggccagc ctcagacaac gcaggccgac ggcacatca 300  
 gtc 303

<210> 1081  
 <211> 448  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-061-Q1-E1-G3  
  
 <400> 1081  
  
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 tgaaacttgg ttttgctgtg accaacttca ccttggttag ggacagataa acatgttgat 180  
 actatcgggt gatacattga tatttgccac acgaatacgt cagtcctctt aagggaggag 240  
 gtcgctagat cttcgggcat ctgctgtaaa tctctcgttg atttggtgta gtacgaacag 300  
 aaaacggacc acaaaaaact cgaggatggg aggaagatca tcatcacaag gacgtttttg 360  
 ttagatgtat atgttgctta gcttattttt ctcgctgtgt gtaagggctt ctatgccctg 420  
 cccatgtaca tgtttggctt cctgcccc 448

<210> 1082  
 <211> 453  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-061-Q1-E1-G4

<400> 1082

ctcacgggtc gatgcacgcg tctagcatgc caccctctct cgcttccgtt cctgtcctct 60

cctctgtccc tctacggtgc ttctgtctcg cgGCCcaaaa tcgcctcatc gaccacgccc 120

ccttccaggc tcccgtctcc atgggtctcc tctcaaacag gattgggagg gagagcctca 180

aggcggggga tcatatctac tcttgagggg cggcgtgggt ctacgcgcac cacggaatat 240

atgtgggcga tgataagggtg atccatttca caagaggaag aggacaggag gtcggaacag 300

gaactgtcgt cgatattatt cttgtgagtt ccaccccaaa acgaagcaac acgccttgcc 360

cgggtgtgcac cgacgaaacc agcgacagca gcacagagac gaacggcgtg gtatcctcct 420

gtctcagctg cttcctagct gggggtgctc tct 453

<210> 1083

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H10

<400> 1083

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aggcgggcat ccggtacacc atcaccggga acaagtactt caacatgggtg acgatcacca 120

atgtgggcgg cgccggcgac atcgcggcgg tgtcggtgaa ggggagcaag cgtgtcaagt 180

ggacggagat gaagcgcaac tgggggcaag tgtggcagac cggggaggac ctcacctgcg 240

agtcgctgac gttccgggtg atgaccagcg accaccgcaa ggccacctca tggcacgttc 300

tccccgtga ctggaagttc ggtgtcacgt accaggcatc caagaacttc taagtagcca 360

cttttctcc tcttcttcaa cctgcatatg cccacaagca accatgcaaa tgataacatg 420

caat 424

<210> 1084

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H4

<400> 1084

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 cgtggctctc ctccacgtc ggcgccacct ccacctgcga ggacgcctgc aaggacctgc 180  
 ccaagaacgg cgacaaggac gacgtcgtca acttcagcct cgacttcgag aagctgcagc 240  
 gcgtcacgct ggacctcatc accgagggcat ccggatccat gtccgcaggc atcgccctgc 300  
 caccctccaa cgccggagcg ccctcctacg gggcgggcgc gccgttcgga ggtgccgcgg 360  
 acgcacccgc cggcacctcc gagggccctg ccagcgccag cgggccatc 409

<210> 1085  
 <211> 453  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-061-Q1-E1-C12  
 <400> 1085

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 tcttgggcag ccgggtgaag acagcgatgg agccgcggtc agagtcggag cagccgcggc 120  
 gccgggaggt ggctcggagc aacgacgtga tcgaggcggc acgcaccaag ctgatgcaga 180  
 agcgccagtg cagcagggtc aaggcgctcg tcggcgctt cgagactgtc atagacaccc 240  
 agaaggacgc cgccgccggc aggccacaac acatctaccg caagtcagct taaaacatac 300  
 tgcggcggcg gggacgcacg gacctccac gcttcgtgtc ttgccttaa ttaattaatt 360  
 aattgttatg atcatgtcgg ccagcccaac gccgtatgca tgcattgaca cggcgctaatt 420  
 taatccctgt ttatttacta ctccgtgaaa tgt 453

<210> 1086  
 <211> 324  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-061-Q1-E1-C2  
 <400> 1086

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 cagcgctgc acaccctccc gccgctgccg ctgcagaacg gcaccgccgg tgacgacgac 120

cgcgacgaag acgttgatga ggacgaagtg ggcgatggcg aagccatgga ggaggatgac 180  
aacgaccatg aggacgatcc gccggtcaag tatcagcggc taagctgcaa cgtggcgcgga 240  
atggctctcca tggacgcagc tgttgacatc gccgtcgccg aacgcattgt cgcgctcggc 300  
actcacagag gaactctcca catc 324

<210> 1087

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-A3

<400> 1087

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agctcaatcg acagttaaaa aaagtgatct taatccggta tggaatgaaa tgcttaagat 180  
ttctgttcct cgaaattacg gacctctaaa acttgaagtg tatgaccatg atacgttctc 240  
agccgatgat atcatgggtg aagcagagat agatctccaa ccaatgatca cagccgccat 300  
ggcctttgga gatacttcac gtcttggtga catgcaaatt gggcgggtggt tcacgaccaa 360  
agacaacgcc ctgatgaaag atagcacagt gaatgtcggt gcaggcaagg taaaacagga 420  
ggtgcac 427

<210> 1088

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-A9

<400> 1088

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gcgtccatc gacgggggtga ccgacgggaa cggcacgtac acgatcgagc tcaaggacag 180  
ccacgaggag gacatctgcg aggtggtctt ggtggagagc ccgcgcaagg actgcgacca 240  
ggtgcaggcg gacagggacc gcgccggcgt cctgctcacc aggaacgtcg gcatcagcga 300

caacctgcgc cccgccaacc cgctcggcta cctcaaggac gtgccgctgc ccatctgcgc 360  
 ctgcgtgctc aaacagttgg actcggacga cgacgacgat cagtaatagc acatcgacga 420  
 cgacgatcga tatg 434

<210> 1089  
 <211> 413  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-B1

<400> 1089

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 cgacgagggc tgcacgaacg atgggggtccg cctccgcctc agtgacgaca accagcctgc 180  
 tggcgctggc gctggcagcg ctggccttcg tctccagggc cgcgggcgag ggcaacggct 240  
 gttccagcgt gatgatgacc ctggccccgt gcatggactt catctccage aaggcgtctg 300  
 agccggggat ctctgctgc tcggtgctgg ccggagtcgt gcagaccgac ccccgctgcc 360  
 tctgcatggt actggacggc actgccacgt ccttcggcat cgccatcaac cag 413

<210> 1090  
 <211> 420  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-B12

<400> 1090

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 tgtacaaaca agtctgttga tgcccgctg gtccaccca tcgtcaccct cgaggccgat 120  
 ggctcatctc ccacctctgg cgatggtcgt cgctgatca gctccaccaa ccaagatgaa 180  
 cttggagcgt tatgccaaca gatgcactac aagacgttgt gctccacgat gacgacactg 240  
 cctggggtga ctacgccaga gcaactctta gatgcatccc tcgggattac agcggatgaag 300  
 gcagcgatgg cggagatgaa gctagacaat gcaataaaat caggcagtgc tcagggtaac 360  
 ccgatgatgt cgtcgctaaa gacatgcaag gagagctacg cgtcgctggt agactccatc 420

<210> 1091  
 <211> 435  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-061-Q1-E1-A11  
  
 <400> 1091  
  
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 tgatccatct tgctaataac cctgcgtgcc cttegttctc gtctcgatcc cgacgacgct 120  
 cccttcgggt ccggcaaacc acatcaagtc gcgatggaga tgaagaaggt cgctgcgcc 180  
 gtectcgccg ccgccgcctc cgccaccgtg gtectcgccg ccgagggccc ggcgcccgcc 240  
 cccaccagcg cctcctcggc cgcgttcccg gccgtcggcg ccgtgctggg cgctccgtg 300  
 ctctccttct tcgcctacta cctgcagtaa aattaaagga gggtcggagg gagatgctgc 360  
 tggctgccat tgcctgtatt cggttggatt ccgtttatat atatatttaa gtactttaat 420  
 ttgggtctga aaatg 435

<210> 1092  
 <211> 315  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-060-Q1-E1-H1  
  
 <400> 1092  
  
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 agattgacgt tgtgaaggac aacgacatgt ggagtgctt gaaccagtgc gccggggaga 120  
 tcgatgaggc gctggaccac ctggacgaca ccgaaggctg cctcgacgac ggcaagctcc 180  
 acgacgtgaa gctgttcctg gacacggcgg aggaggacac gtggtcctgc gacgtctgct 240  
 gcaagcacgc cccatccacg cccgtcaaaa ccacgtgct cgccaagaaa aaggacttcg 300  
 aggcgctcat gcgcg 315

<210> 1093  
 <211> 435  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-060-Q1-E1-H10

<400> 1093

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agccagccag cagccagctt gctcgcgcg cncgtccttc ttcctcgcct ccgttccatt 120  
ccgtcncgcc ctccaccgcc gccgcgcgat tcagggatgg agatgaagaa gatcgccctgc 180  
gccgtcctcg tcgcgcctc gccggccacc gtggcgctcg ccgcggaggc tccggctccg 240  
gccccacca gcggtcctc cgccgtcgcg cccgccgtcg gcgcgcctt cggggccgcc 300  
gtcgcctcct tcttcgccta ctacattcag tgagccggcc ggggcgccc gaggccgagg 360  
aagagacgaa ggggagagag agtgacatgg ctgcgcgat tccgatgcgt gggcatgttt 420  
tttgattcga cacac 435

<210> 1094  
<211> 446  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-060-Q1-E1-H11

<400> 1094

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aagtcaaggt acccaaaaac aaacccatgg gatataatgc ttggcatgaa cctctggggg 120  
accatatata atgctgtaat tatgtttgtt gcgccattac tattcagtaa ctggccatat 180  
gcaaattggtt ttgaggcatt gagattttgc caggagaacc cagagggtggc ctgggacatt 240  
ttcctattct gcctatgtgg cgccgtgggg cagaacttca tcttcttaac catcagccgg 300  
tttggctctc ttactaacac aacaatcact accaccgta aattcatgag cattgtggtt 360  
tcatccgtca tcagtggcaa tccattatct ttgaagcaat ggggtagtgt tgtgatggtc 420  
ttcttaagcc tctctatcca aatata 446

<210> 1095  
<211> 407  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-060-Q1-E1-H2



<400> 1095

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gtccccgggg aaaaccccg c aattgcggcg gccgccctga cgggggaaaa tggttgcca 120

gaattcaaaa ttgatetcaa cagccccctt gttttccaag tttgccatct tgaggaacgg 180

taccaggaat gggttcacca accgatcgtc agcaaggagg gtccacgctt tttcggaaat 240

gatgtcctgg agttcttgac tcgcacgaag tgggtgggctg tgccaactat atggctgcct 300

gttgtctgct gcctgctcgt gaaatctatt ctgatgggctc atactgttca ggacgtagct 360

atgatggctc tgtttgggat atttatttgg acgctgatcg aatacac 407

<210> 1096

<211> 273

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-060-Q1-E1-H4

<400> 1096

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ggccggggccg tggaacacnt gccacgcgac cttctacngc gggcggggacg ggtccggcaa 120

cacggcgggc gcgtgcgggt acaaggacac gcgcgagcaa gggtaacngc tgcagacggt 180

ggctgtgagc acggtgttgt ttggcgatgg cgcggcctgc ggcgggtgct acgaagtgcg 240

gtgcgtggac agccccagcg ggtgcaagcc cga 273

<210> 1097

<211> 208

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-060-Q1-E1-G1

<400> 1097

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caatgtgtgc cgcggtgagg gcttcttggc cggcaggtgc agcaccttcc gccgccgctg 120

catctgcact acgcaatgct aaacaagatc gctcgatcgc ttgccatgca tcgacaacct 180

attcttaata acgttcatta tctcgttc

208

<210> 1098

<211> 428

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-060-Q1-E1-G4

<400> 1098

ctccctgggc ccaacaagtt caatggccac caaaggcaac cccgggcccgt caacccccgg 60

aaaaaaggat tctgaaggca taccggtgaa aaaaaccgga aaggccctgg taatcggaat 120

ctacaacaag cccatgaccc ctgaacattg caacatggtg gttgaaaggc tcggtgacta 180

cctcttaaag caaggcctgt gaatgcatca aaacaacgac accaacgcca aaattaatta 240

attagtagtc tcaatgcctt gggattgtgc gtggccgctc cgttgaacac caccatcct 300

tcgttcggca ttttttcccc cctttgttta tataatttat tgtatcgttt tggcaaataa 360

ttttgtgatt cgaccccaaa gcaagtttgg ttgtcctacg aattgtaaac ctgggacaat 420

atataatg 428

<210> 1099

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-060-Q1-E1-F1

<400> 1099

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ccagggtgctc ttgctgtgtg atctttgtcg ccttgtgacg ctggggaccg ggttattggc 180

gggagtttgt cagaataata cataaagaac tgggtgccacg agatcggggg acttcagatc 240

agggaaacct tgagccatgg gcacagttgt ggatgccgct ccagcagttg tggctgaggt 300

cactgagaac atgttgggtg gcaagaaagt tacagttgta tttgtcctaa gtggtcctgg 360

aagtggaaaa ggcacacagt gtgccaacat cgtggagcac tttggattca cccatcttag 420

tgctg 425

<210> 1100  
 <211> 384  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-060-Q1-E1-D1  
  
 <400> 1100  
  
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 tccggaatcc aacggcggcg ggaaaaaacg ggcaattccc aaaacaggaa ccgaaggaaac 120  
 aaggttgag gataaccccc cgctaacaaa aacaataaag ggtgcggtaa aaggaccccc 180  
 cccggggaac atctggggca ccgtcgtcgc cacctggtac gacgtgcccc gtgtggagcg 240  
 ccacgtcgcg ctccctggcc ttatccggac gctcaagatg tgcggcacct acggggccac 300  
 cttcgccacc atcggggggc tctacatcgg cgtcgagcag ctctgtcaga gccagcgcaa 360  
 gaagcgcgac ttcgtcaacg gggc 384

<210> 1101  
 <211> 391  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-060-Q1-E1-D4  
  
 <400> 1101  
  
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 tttcgacca agcataaacc cgtcctacgc caggngctg caggacgtgt gcagggacta 180  
 cctcaaggga ccaccatcg ccgcgttcaa cgacatcatg acgcccggca agttcgacaa 240  
 catgtacttc gtcaacctcg agcgcggcct cggcctgctc agcaccgacg aggagctgtg 300  
 gacggacca cgcaccaagc ccctggtgca gctctatgca tccaacgcca cagccttctt 360  
 cgacgacttc ggccgcgcca tggagaagct c 391

<210> 1102  
 <211> 403  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-060-Q1-E1-B1

<400> 1102

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caagttggtt aacaacaaca agggcggagt tggtaacgtc aacttatcca attgagggtcg  120
gcaacttcaa gaacggaagt cctctcaaca caagcccaag ttagctcaca catcagcggc   180
aagtcgtcan ctcaactgct cctgtaagct tgccacctcc tgaagtaaag tcttccccac   240
caccagcacc gattagctct ccaccacctc cggccaagtc accacctcca cggggcccta   300
tgagctcact tcttccccct gtgaagtctc canctccacc agcgccggtc agttcgccan   360
canctccaat gaagtcccaa cggcggcagg cacaattagc tct                               403

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<210> 1103  
 <211> 389  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-060-Q1-E1-C1

<400> 1103

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ttgacgggac ggacccaaag ctgatgaacc agtcacgaat caaccggatc gctcggngat  180
ccggcangcg cgtggaggaa gtggtgcaca tgctggacga gtacaagcga attgccaagg  240
tgtggaagaa attgccagtg ttgaacaaca acaggagatc ggatatgaac cgcgacatta  300
ngcgcataag cgatgcgatt cctcccaata tgctgactca gcttggtggc atcgctgggc  360
tgcagaatat gatcaaaca atgggcggg                               389

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<210> 1104  
 <211> 308  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-H12

<400> 1104

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 aggtctaagg cttacctcgg gtcgtgggtcgt ttctcacatg ggcttcaatg ccgctgtcgt 180  
 accccccac tccccagcgt acgtcatcgt caatttggtc acacatgcga ctatccatgc 240  
 tgatatggac ggcgtcatg tagtctattc ctactaagtc tggcattttc cagggctaag 300  
 tgttttttt 308

<210> 1105  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-H3

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 cgaccacgac ccccggaag gtgttcgggt tcttcggcgc gctgggcgac gtggcggttcg 180  
 cgtacgccgg gcacaacgtg gtgctggaga tccaggccac catcccgctg actcccgaga 240  
 agccgtccaa gaagcccatg tggaagggcg tcgtcgtcgc ctacgtcgtc gtcgcgtctt 300  
 gctacttccc cgtcgcgtc atcggtact gggcggttcg caacagcgtc caggacaaca 360  
 tcctcatcac gtcagcaag ccaggtggg tcaacgcgtc cgccaacatg atggtcgtca 420  
 tccacg 426

<210> 1106  
 <211> 373  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-H4

<400> 1106  
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 tggacggatt ggtaggcctc ttgaaagtcc ggggtggtgag gggcatcaac cttgcctacc 180

gcgacgcaag aggcagcgat ccgtatgtcg tcctacgact tggcaagaag aaacttaaga 240  
 cgagcgtgaa gaagagatct gtgaacccca tctggcacga ggagctaact ctgaccgtca 300  
 cagatcccgag cctagctctg aagctggagg tgttcgacaa ggacacgttc agcagggacg 360  
 acccgatggg gga 373

<210> 1107  
 <211> 440  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-060-Q1-E1-A11  
 <400> 1107

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 acaggcgtgg ggaagtcatt cctgctgctg cagttcacgg ataagcgctt ccagcccgtg 180  
 cacgatctca ccatcggcgt tgaatttggc gcccgcatga tcaccatcga caacaagccc 240  
 atcaaactcc agatttggga cacggctggc caagaatcat tcagatctat tactaggtca 300  
 tactacagag gagctgctgg agcccttttg gtttatgata tcactaggag ggagaccttc 360  
 aatcatctcg caagttggct agaagatgcc aggcaacatg caaatgctaa catgacagtg 420  
 atgccgattg ggaacaaatg 440

<210> 1108  
 <211> 414  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-060-Q1-E1-A3  
 <400> 1108

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 ctctagccc cggtagcagc gctccgaacg aagagagcaa ccctgcggca gcgagcaaga 180  
 ggccgtatct cgagaggaac tactccgtgc tggaaccttc agaagggagc cagctcgccg 240

acgacgtgga aggggaaagc tctctcgaga acgtgaagaa acagctcgag ctcaacaaga 300  
aggcaatggc cgctctttac aaggagcttg aggaagaacg gagcgcttcg gcggtcgcgg 360  
ctagccagac gatggccatg atcaataggc tgcanganga gaaggctgca atgc 414

<210> 1109  
<211> 110  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-060-Q1-E1-A5  
  
<400> 1109

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tgatattgac tctatagttc atggagttaa ggatgtcata atggggggggg 110

<210> 1110  
<211> 435  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-059-Q1-E1-G4  
  
<400> 1110

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tgctgggtgc gtccggagaa catgaaggcg ccgcgcacgc tgtacgagat cgactcgaag 180  
acgcccggga cggagatcgc cgccgagacg tcggccgcgt tcgccgcctc gtccatggtg 240  
ttccgcgacg acaagaagta ctgcgcgaag ctgctgaaca aggcgaagct gctgttcacg 300  
ttcgccaaga gccacctggg cagctacgac ggcgagtgcc ccttctactg ctctactcg 360  
ggctacaacg acgagctgct gtgggccgcg acctggctgt acctggcgac aaggcggcag 420  
gtgtacgcgg acttc 435

<210> 1111  
<211> 198  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-059-Q1-E1-G6

<400> 1111

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atatcagaca tcgacgccga cgcagctgcg acgaagaccc tgatggggcac gtacgatgtc 120

aggacgacca tccgacaggg caggttcccc aaggtgaaac acgcgcccga ctctcacatc 180

cggtcatcc gcaccatc 198

<210> 1112

<211> 235

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-G7

<400> 1112

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gccgccgcaa ccgcgagact atccatgggc gcctacgcaa ccaatcgcaa gactcttgat 120

gggcatgacc gacttgacgc cgtcgtctcc acacacaaag ttgcgcccga cggcattcca 180

gtctcagttg aagttgcggc tgatgaaaag gtacatcata acgtggtgct ggatg 235

<210> 1113

<211> 431

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-059-Q1-E1-F12

<400> 1113

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gctctgcctg ctctctttct ctggccgtct cgcgcgggcg gagaagactt tccgcggagg 120

cggaggcgga ggctacggcg ggttgaggc cggtggcgga ggccggcgcg gcggctactc 180

caccccgagc gaggcagcgc catccacgcc tgccgctggg gagacgacga ccccttcgtc 240

aggcggcggt tactccaccc ctagcgaggc agcgccatcc acgcctgccg ctgaggagac 300

gacgacgact ccttcgtcag gcggcggggg ttacggcggt gcaaccggca aggttcctc 360

aggcggcggc gggctggacc ccgacggcga ccagaggtt gggctgaacg ggaaggcgat 420

cgangagatc g 431



<210> 1114  
 <211> 384  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F2

<400> 1114

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ctcctcgctg tcgccgtcgt cctctccaac gtcccctcct cggggcgccct ggctcctcgt   180
tcgtcgtctc tgctgcacca gtcgtctcgg tctgagagtg agactgagac cgacagtagc   240
agcgggagaat cttcttcgtc gtcgtcgtcg gaagaggccg gcgagaagga gaaggagaat   300
gagcaggaga tggagaaggc ggtcgcggcg gagaaggctg cccagcagga gctgctcaag   360
tacgccaagg agaagggcac cgtg                                     384
  
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<210> 1115  
 <211> 315  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-D6

<400> 1115

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gcagcacacg cctacctggt tgggctcttc gaagatacca gtctgtgcgc gatccatgcc   180
aggcgcgtga ccatcatgcc cagtgcatt cagctggcaa caaggatccg tggcaagagg   240
gcgtatgtct gtcgacgaga tgaagaactc tgcgctcggt ttgtgtgttc gcctctctca   300
ccctgtaagt tttgt                                           315
  
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<210> 1116  
 <211> 428  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-B12

<400> 1116

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gcgtaccaaa ggaactggat cgagatcgag aacgtcgaga acctgtccat caacggccac 120

ggcaccatcg acgggcaggg agccctgggtg tggagcaaga accagtgcc gcattcttac 180

aattgcaaga tcctcccgaa tagcttgggtg ctggattttg tgacgaacgt ccagatccgc 240

ggcatcacgc tgctcaacag caagttcttc cacctcaaca tcttcgagtg caagaacgtg 300

ctgatcgaca aagtgacggg caaggccccc ggcgacagcc ccaacacgga cggcatccac 360

atcggcgact ccagcaacgt gaccatcagc agcaccacca tcggcgtcgg cgacgactgc 420

atctccat 428

<210> 1117

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-B3

<400> 1117

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tcggaagggg ctagagatgt atgacttccg cttcgacgcg gctgattcgg ctgtcaagct 120

tcccagccag ctgcgctgcg ctccgcattg ctcttgatgg catccagtag atctgttcgc 180

cccccaatat caaaggccgg aggaggaata aacgttaggg agtcggccat gggatgcttt 240

tcatgctgct gtgtggcaga tgacgacaac gttggcagga ggaatgagca tgacgatgcc 300

tatgttccta tccctgctca tgtttataat tttggagcta gccggttccc agccccaggg 360

cctggtcatc tcg 373

<210> 1118

<211> 216

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-H4

<400> 1118

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ccgagagacc tcagccctca ggcaagccga ccgccgacgt accaccgcgc caacccgaga 120  
gaaagatgga tatgatcaac aggatgctca tcgccgcgct cctcgtagtc accgtctcag 180  
ccagcgcatt gctggcctcc atcgaagccg ccgccg 216

<210> 1119  
<211> 337  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-059-Q1-E1-A2  
<400> 1119

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cagccgcgtc gtttgtgcgc acagtcactg ctgatgattc tcagctgccg gctcactgca 180  
ccgtgggcgc gtccgccgaa agccgtccta atcatgcacg caagtggacc actgggcggc 240  
cgtggacctc cgggatctct cacgcgcgct tcggctcggc tcaccacagg tgccctacta 300  
cggttacttt acgtaccoga gtccattgca ttggttg 337

<210> 1120  
<211> 385  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-059-Q1-E1-A3  
<400> 1120

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cgctgctgc ttctggttgg tgttgcgcan gcggtagtgg agttgggtgcc tgctgatgat 180  
aatatcgccg ccgccgctgc tggcacggcg gtggacgatg gcgagccgcc tcagcagtgc 240  
gcgaccccg tgagcgtgga ggaggcgtgc cgcggcgcgt ccgagacgca cgccggcgtg 300  
gcctacgacc actgcatggc gtcgctgggc gccgaccgc gcagcaagga ggccggcaac 360  
aagaacatgc acgggctggc ggtgc 385

<210> 1121  
 <211> 406  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-059-Q1-E1-A9  
  
 <400> 1121  
  
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 tacctgtatg gcgagtcctt atacttactc atacataagc tgcgcgcgcg tgcgtccgg 180  
 acgcgtgggg ccgtgggcga gtgcggcgtg gacgaggagg aggagctcgg gctgagcggc 240  
 ggcggcggca tcggcgcgcg cgacgcgctg cggcggacgc ttgcgcagcg caagccgacc 300  
 aaccggtaca tcagctacgc ggcgctgcgc gcggaccacg tgccgtgcaa caagcgcggc 360  
 cggctctact acaccaactg cgcggcgcag acggccgcca acccct 406

<210> 1122  
 <211> 301  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-058-Q1-E1-H2  
  
 <400> 1122  
  
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 tccgccgggg ggcccacccc gccgggcgtc agcgcgccc ccccgcgggc gcagcagcag 120  
 cagcagccgc ccccgctcgc ggtgctggag cgcgtgcgcc gcgtcggcag cggcgcgggc 180  
 gggacggtgt ggatggtgcg gcaccgcggc acggggcgcc cctacgcgct caaggtgctg 240  
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 c 301

<210> 1123  
 <211> 210  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-058-Q1-E1-B9

<400> 1123

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ccgtccacac ctccctggtc agtcgtatac gaggatcatg ccggctaacg tggacgccgc 120

ggcccagtac cggtaggagg ttgcccttag cagcggtccc ggcgccaga gagtgccggt 180

gtgcagtgga ctgttcggtc atcgaggccc 210

<210> 1124

<211> 183

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C10

<400> 1124

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ctttgtcatg ctgatcttgg cgccttggct gggacctcct gccctcggtg tgttcaggtg 120

gatcatcatc acgcagctgc gctgtctgcg gcgtcggttg tgttcggttg ctttcttcag 180

tgg 183

<210> 1125

<211> 285

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C3

<400> 1125

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tggatcatgt ggaacaaatg acggcaagga cgaattctgg atctgttggtg atagttgtga 180

gcggtggtac catgggaagt gtgtcaagat cactcctgca cgtgctgagc acatcaagca 240

ctacaaatgc ccagattgca acaacaagag ggcaagagcc tagcgc 285

<210> 1126

<211> 231

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C4

<400> 1126

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accacgatga gcacagcggg gagcccgatc aacaggaaga gcgaggcaat accttatgtg 120  
gatcacgtgg gacacatgcc cgacaggaca agttccggct cagacgagat acttctgagc 180  
tgtggtagca tgggaacatg cgtcaagatc acatccggca cgtgcgacag c 231

<210> 1127

<211> 307

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D12

<400> 1127

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tctcttcggc tccggcaaac cacatcatgt cgcgacggag atgaagaatg tcacctgctc 180  
cgtcttcagc agggccgcct acgccaccgt ggtccacgcc gccgatgcta cggctccac 240  
cactacgagc accacctcgg ccgcattaca ggccgtcggc tctgtgcagg gagatacagt 300  
gctctcc 307

<210> 1128

<211> 383

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-G5

<400> 1128

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gggcctagtg ggactgcgcc actgcatct cgccaccagc ggctccgccc agcagaaaga 120  
cattgacctg ctcaggagcg tcgaaggctc tagcgacggg atcaggcccc agtcccaatg 180  
ccggttctcc agactgaatg aagctggctg atacggaatc cgatgcaccg gcgcctgcgc 240  
cggcgccggg gccgtcgtcc ggttgaactg agaagcgtgc gttcagccaa gcaaagtggc 300

caaaaccgag aactaattaa tgggtccatc gtgtgtcagg ctactattgt tcttgccata 360  
 agtatatata gatgcgcaaa gtg 383

<210> 1129  
 <211> 419  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-G9

<400> 1129

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 cacggcatca gcatcggaag cctagggcgg tacaaggacg agaaggacgt cacggacatc 180  
 aacgtcaagg attgcactct taagaagacg atgttcggcg tccgcatcaa ggcgtacgag 240  
 gacgccgcct ccgtgctcac cgtctccaag atccactacg agaatatcaa gatggaggac 300  
 tcagccaacc ccatcttcat cgacatgaag tactgcccc acaagttgtg tactgccaac 360  
 ggcgcctcca aggtcacctg caaggacgtc accttcaaga acatcacccg cacctctc 419

<210> 1130  
 <211> 422  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-H1

<400> 1130

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 tgatgggagg tgtggatcac tcggtacggc ctctttcgag gctccggaga aaatgatttg 180  
 tgaagacgac acgtatccta agaaacaagc tttgtttgat ggggaaacac aattagctgg 240  
 agacgagcat tctcagtcac agaaaatttc ccgtggccgg attgaacatc ctacgtgtc 300  
 acctcttcac gaggaactta tccccacttc aattcatacc cctggattac cctattcttg 360  
 tgatgtcccc atggttgaag aggccataga cgccatctgc aagagccacg gaacaccacc 420  
 ag 422

<210> 1131  
 <211> 408  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-H2  
  
 <400> 1131  
  
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 cctccaaggt ggccgtcaac gacgtcgtct tcaagaacat ccacggcacc tccaacacgc 180  
 cggaggccat caagctcaac tgcgccaaaca acctgccctg ccagggcggtg cagctcatca 240  
 acgtcgacat caagtacaac aggtccgaca acaagaccat gtccgtctgc aagaacgcca 300  
 tcggcaagtc cattggcatg gcgaaggagc tcgcctgcgt ctgaacctac ttgcatccat 360  
 cactcactct tcgtcacctc tctctttctc actctcgcca gtcttttt 408

<210> 1132  
 <211> 419  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-H8  
  
 <400> 1132  
  
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 cagcggcaac ttcgctaagg tgtacaaggc ccataagggtg gccaccggcg aggctgtggc 240  
 cgtcaagggtg ctggacaagg atgctgtgca ccgctccggc atggcggaga aggtgaagac 300  
 cgaggctgac gtgatgcggc gcgtgcgcca cccgaacgtc gtccgcctcc acgagatgat 360  
 ggccacgcgg tccaagatct acttcgtcat ggaatacgcc agcggcgggg agctcttcc 419

<210> 1133  
 <211> 381  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB148-057-Q1-E1-F12

<400> 1133

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gcggctggca ccgccgtcga caacgacctc cccgactacg tcatccaggg ccgctctat 180  
tgcgacacct gccgcgccag gttcgtgacc aatgtcaccg agtacatcgc gggcgccaag 240  
gtgaggctgg agtgcaagca cttcggcacc ggcaagctcg agcgtccat cgacggggtg 300  
accgacggga acggcacgta cacgatcgag ctcaaggaca gccacgagga ggacatctgc 360  
gaggtggtct tggaggagag c 381

<210> 1134

<211> 135

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F4

<400> 1134

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gcgcgacatg gtgatcgagc tgccgcagga actgatcgtg aaccacatca agacggatcg 120  
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<210> 1135

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D12

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ctgaccgacg aggacctgga cgagctgcgg ggctccttcg agctcgggtt cgggttcgac 180  
gaggagtccg gcgggcacca cctccgcgac acgtccccg ccctcgactt ctacttcgcc 240  
gtgaaccgtc agctgtccga ccccgccaag ctgcggacgc tgctgtcggc ggcgagcctc 300

acgtccacgc cgtcggccgt gtcctcgtcg tccacgtcc cgcacgtccc gaacgaccca 360  
cgcagcccca acgtcggcgc aaccgccgcg tctggcg 397

<210> 1136  
<211> 329  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-E12

<400> 1136

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aaccacatca attcgcgatg gagatgaaga acgtcgcgatg cgccgtcctc gccgccgccg 180  
cctccgcgac cgtggctcctc gccgccgacg gcccggtcc cgccccagc agcgcgctcc 240  
tcggccggcg ttcccgcccg tcggcgccgt gcggggcgcc tccgtgcgct gcttcttcgg 300  
ttagtagctg cggtaagtgg taggggagg 329

<210> 1137  
<211> 256  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-E2

<400> 1137

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gccggctcgc tcttcgcgga gatgcacgcg cgccggcccc tcttcgaggg ccgcaccgag 180  
gtcgagcaga tccacaggat cttcatgctc tgtggctcgc cgccgaaga cctctggcgc 240  
cgcttggggc tctccc 256

<210> 1138  
<211> 435  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-057-Q1-E1-E3

<400> 1138

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ccttggtagc ggcggtggtt ctgtgcctcc tgtagcgac agggccgcan ggggccatca 180

gcgccgaggg gatggtgtca ttgacaatt tgatcagctg caaggtactg ggcaactgcg 240

acaagaacct gggccccgag gcctccccgc cagggaacc cgccaacgac tacacccgcg 300

gctgcaaccc gatcacgggc tgtcgcggct gatcatatct ctctggtcga tgtgcgcgca 360

atgtcaatgt cgcacgcgcg tgcaggtacc aggcctcagc gtgtggtgcc gcgtgtgtgt 420

atatattaca cacat 435

<210> 1139

<211> 308

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-E5

<400> 1139

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cgcggccggt gcaccggcag agtcaccgag ggcaggcagt cctgcccaagg caccggccga 180

gtcaccgaag gtaggcagtc ctgcagctcc tgccagggca cccagagtct gctgccacga 240

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atggtcgt 308

<210> 1140

<211> 383

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A8

<400> 1140

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caccttgagt atagcggcag caactaggca ggaccacggc gatatgcaca aactcgacgg 120

gcagcacaaa tgggtgactc accgaacttg catgcttcaa aacactgtct cgactgacgc 180  
atctcactac ttatcagtta tctcacgtcc ctgcattgca tatcatgtgc tatccattgg 240  
ttaccacaaa cagtataacg tacaacatcc agcagctata ttatgttcta cagtgttaaca 300  
ccctgaattt tacggtacaa aatttcatct ttaaattgcaa accacattca ggtgttacct 360  
cttgtctctc tctctatctt ttc 383

<210> 1141  
<211> 404  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-B3

<400> 1141

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cggagatgag gaagacgtac aacctactgg acacggtgag cgggcacacg atccaggtgt 180  
acccgcggtc atggacggcg atcatgctga cattcgacaa cgcgggcatg tggagcgtcc 240  
ggccaacgt ctgggagcgg tactacctcg gggagcagtt ctacatcagc gtcattctgc 300  
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tcctggggct gccgtgccg ccatactacg ccccgcgcg ctaa 404

<210> 1142  
<211> 399  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-B9

<400> 1142

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ggcctcgatt ccggcgacga ccttcgccgt catcttatcc gtcctttctt gtgccggggc 180  
tggcaccgcc gtcgacaacg acctccccga ctacgtcatc cagggccgcg tctattgcga 240  
cacctgccgc gccgggttcg tgactaatgt caccgagtac atcgcgggcg ccaacgtgag 300

gctggagtgc aagcacttcg gcaccggcaa gctcgagcgc tccatcgacg gggtgaccga 360  
 cggaacggc acgtacacga tcgagctcaa ggacagcca 399

<210> 1143  
 <211> 149  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C1

<400> 1143

gcgtccgaaa ggaactatat actcaccocg gtcatatgat tggtaactga aaatatgact 60  
 cttgtgctgc ctaacctggg ggctattaga ttatgttggg actccaaaga catgatttag 120  
 aggttaagaa tttgaatcca agtttggac 149

<210> 1144  
 <211> 430  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C2

<400> 1144

gggtcgatac aagcgtctac actcacttct gcgtgtctca gctatcgggt ttgagggcta 60  
 tgagaagcgc cttgagatca cattctctga ggcacctgtc tttgtggacc ctcatgggag 120  
 tggtttgctg gccctctcca gggccagat tgactctgtt ctggatcttg cacggtgcac 180  
 aattgtgtct gagctctcca acaaggattt cgactcatat gtcctttctg agtcaagctt 240  
 gtttatctat cctctgaaga ttgtcatcaa gacctgtggc actaccaagc tcctgctcac 300  
 cattccaaga atccttgagc ttgctgaaga gctgtctatg ccacttgctg ctgtgaagta 360  
 ctcccgtggg acgttcatct ttcctggcgc acagccagcc cccacagga gcttctctga 420  
 ggaagttgct 430

<210> 1145  
 <211> 244  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-057-Q1-E1-C3

<400> 1145

gcgtctagct acattcctaa tatctgtttt cactgcttt gacggcgaga acgtggagag 60  
tgctcctcct cctatgaaga aggactacaa gctggctaata cttctctgct gggaaganga 120  
agcggatgcc atggaggaga aggcgggagt gcttgatgag taagacgggc ttctggggtc 180  
gatttgcttc tgagttgttt attttatatc gtcgcaattt cgtgggtgtc gtttggttat 240  
tctg 244

<210> 1146

<211> 330

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C4

<400> 1146

gggtcgagac acgcgtctag attgatgtcc tattatctgt gttccactgc tttgagggcg 60  
agaacatgga gattgcatca catcctatga agaacgactc catgctggct aatcttctct 120  
tctgttacgt ggaatctgca gcgatgaaag agactgtggg agtgattgat cactgtgaca 180  
ggcttcatcg gtccacttgc ttctggattg cgaatcatat atcgtctcaa attcgtgctt 240  
gtcgatcgat tattcgggtga ttcacacaag ccaactgtagt gttatcaaaa tttggcgtcc 300  
gtgtccatgt aaccttcagc ttttgcaaca 330

<210> 1147

<211> 239

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C5

<400> 1147

tgcattgact gcagtgcgta agcagactgt gcgtgcctgc ccacgcaatt cgacagcaca 60  
ccgatctcga tggagctgtg atcgtgtcca ctcgatcgag agatcgattg atgcttgaga 120  
ttaaatttgt agtccacatt atatataaga gatacagctt aaactaaatt tattccatca 180  
agcacgaccg ccgcaccacc gaagtcgtcg ccgtcaagta cagcgagcgt ggaaaaagg 239

<210> 1148  
<211> 99  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-H11

<400> 1148

acaatacaag actctaaatt gagtcagaga atggatggcc ctctgctttg tggaccaaaa 60

agtgggttcag gaatagcaat cagttgggct acattttttt 99

<210> 1149  
<211> 396  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-H12

<400> 1149

gcctccgcac gcctccacct cctcctgcgg tcccaactcc catcctttgg ttcaggaggg 60

aggcaggcag gaaggcaggt tgcaggaggg attggctccg ctctgctcc attgcgcgtg 120

atccggctcg ttcttttgat tgatctaggc gtttcttgga tgcctggaa ggtcaaacgg 180

ttgttggaag cctcgctggg tgcttcaacg aacgcgaagg tgttgctgtc atttagagcg 240

tcttgattgg atttgacctg ttggcctggt ggcgtgccgt cgttgattga gctcgaggat 300

gatcaagtgg gggctcagca gcggcacgcc cgcggattcc tactacgagg tccggtcaga 360

ttgcacggac ggtgtgccca agagcaagtt caagat 396

<210> 1150  
<211> 312  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-H2

<400> 1150

gtgatgtcaa tattatgccg gtgcggtctc cttggtccca gactctgcgg aaaatgactt 60

tgatacttct catgctactg gcttttctaag cagctccgcc ggcgagcgcg gtgggtccgcg 120

gtgacgagtg ttatcaggtc tgctacccag tccacatgat tggcgtagga gtgatgtttc 180

gaggtgaaag cagatctctg ctagccacgg gcccatggac atttacaggg atcacgcttt 240  
 tgggttccta acagccacta ttgtttccta tatcatttgc ctagccatgc atgtcttgca 300  
 ttgcgttttt ta 312

<210> 1151  
 <211> 441  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-056-Q1-E1-H6

<400> 1151

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 gcggcggtgca cggctattgg cttcgtgttc tgctcgattg cgccccccac cctcctcgg 120  
 tagcgcgcaa gatgaatgaa gattggctct ggtctgggtg gcgtatcagt agatttcatt 180  
 ttcattgcga gtgtgccgtt ttctttgaat tcttgggagg gttcgagtga ggttttgggg 240  
 tttcgccctg ctttcanggg cgggtgtgtt ccgatgacgt ctgccaagta gtaattaatt 300  
 ttacaggatt anttttgggt ctgtttcttt gaatgataaa ccgaaatcct tgtttttttt 360  
 tgaaaggatt aacatcatat tgctttttta gtgctgtttg gttcatcaac ggtaacatat 420  
 atagcaacag taatgattca t 441

<210> 1152  
 <211> 249  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A1

<400> 1152

gcgtcaacgc tcatcttcgt gaccgggtcc cggagctggt ccttcgtgga gcggcccggc 60  
 gcgctgctgg tgatgcctt cctggcgggc cagctggtgg cgacgtgcat cgccgtgtac 120  
 gccaaactggg agttctgcaa gatgcacggc atcggctggg gctggggcgg cgccatctgg 180  
 gcgttcaacg tcgttgcgta gaccccgctg gacgtcctca aatccgccat ccgcgaggcg 240  
 ctctccggc 249



<210> 1153  
<211> 420  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A2

<400> 1153

acgcgtcaac atgaactcat tggatgttgc aaaaggcaaa taaagaagaa aacaaatatc 60  
acaaatgcag tggatatagaa ccacaatata tggttcatga taggcaaaca tacttacttt 120  
tagttcaggt tattgagatt tgtgctggac gaattgggtga ggctgtgtca atgataaaca 180  
acaaggataa tgattggttt attcaactca catgtgccta cttgtacagt ctttaaccata 240  
gggattttact gtcccaggat actatgaaga attaagccag aattaaattg gatttaaaaa 300  
ggacatccaa ttgaatatgc aagagcttgc tcaatctctc cttttgagat gtgatgagaa 360  
aactagcaat aagaagacca agaaaacctt atgggatgtc ctaagaagtt tatactatgc 420

<210> 1154  
<211> 420  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A3

<400> 1154

cacacgtcca ggactggctt caaaaaaatg caaccaaaaa cttccgaccg gacagccttc 60  
ttgggaaagg agggtttggg catgtctaca aaggttggat tgatgagcac acgcttgctc 120  
cttcaagacc tgggagtggg atgggttgtt ctgtgaagaa gcttaaaccg gaaggttttc 180  
aaggacacaa ggaatggctg acagagggtg attaccttgg ccaacttcac cacaagaatc 240  
ttgttaagct cattggttat tgctcagatg gtgacaaccg gcttctggtg tatgaattta 300  
tgcccaaggg aagtttggag aaccatctgt ttagaagaag tgctgatcct ttgtcatggg 360  
caataaggct caaagttgcc attggagctg ctaggggctt gtcattttta catgatgctg 420

<210> 1155  
<211> 430  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A4

<400> 1155

gggtcgagac aagcctctat aatgggtcct caacatgaag accgccacct tctccgtcga 60

ggcgtccggg ttcattctgca agaacatggg gtccacaaac acggccggcg cggagcggca 120

ccaggcgggtg gcgctccggg tgcaggggga cctcgccggcg ttctacaact gccggttcga 180

cgcgttccag gacacgtgt acgtgcacgc gcggcggcag ttcttccgca actgcgtggt 240

ctccggcacc atccattca tcctccgcaa ctccggcgga gtgttccaga actgcctcat 300

catcacggg cggcccatgg acaaccatca gaactcgggt acggcgcacg ggcgcaccga 360

ccccaacatg aagtccgggc tcgtcatcca gaactgccgc ctggtgccc accagaagct 420

gttcccgga 430

<210> 1156

<211> 408

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-H10

<400> 1156

tctaaattga gtcattattac gcctgcgtca cccaccata tccggccagc ccaacgaaaa 60

tgctgcgcgc cacagctgcg gtctcttctt acatcctcgc cgtcgtgcc ctccagcggg 120

ccgaggcacc ggcagagtca ccgaaggcag gcagtcctgc caaggcaccg gccgagtcac 180

cgaaggcagg cagtcctgca gctcctgcc aggcaccgga gtctgctgcc acgagaactg 240

ccccgctaa ggcacctcaa gccgcctcca ccccgccgc tgccgctgcc ccatcgtcgt 300

cgtcgtctag gaagtctggt ccagctgccg cgcgcaccac cgcgcctct acaccgtctt 360

cttcacgga cgaggagttg agcccttcgc cgtcggcatc caccgccg 408

<210> 1157

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-F9

<400> 1157

ctcgcgagtc gacacagcc tccaaaggat ctccagcatag acttgattta gttatggacg 60

gattggtagg cctcttgaac gttcgcgtgg tccgggggtat caaccttgcc taccgcgacg 120  
 caagaggcag cgatccgtat gtcgtcctac ggcttggcaa gaagaaactg aagacaagcg 180  
 tgaagaagag atccgtgaac cccatatggc aagaggagct aactctgacc gtcacagatc 240  
 ccagccaacc actgaagctg gaggtgttcg acaaggacac cttcagcaga gacgaccca 300  
 tgggagacgc ggaggtggac gtggcgccac tgatggaggc ggtgagcatg aaccgcggg 360  
 aggagagtct gaggaacggc gccatcatca ggtccgagcg gccgagcgcc aggaactgcc 420  
 tcgccgacga gagcc 435

<210> 1158  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-G12

<400> 1158

tcgacacacg cctctacaca cgcgttctga tacttgtgat gtcccgatgg ttgaagaggc 60  
 catagacgcc atctgcaaga gccacggaac accaccagat gagaagattg ccatcaccaa 120  
 agctattata aatgtatcga atggatccaa gccccactc tttgctggca tcatagcact 180  
 tgtgatgagc atcgcaacga tgggtccgtct gaccgcgacg atgatgcctg ggagggttct 240  
 cgggtgctgcc ataggtggag ctaccctctc agaaggtaaa tcaaaagtac aagagcgcca 300  
 gcggtccaag ctatcagaag aggtctgtga ggaagctgaa gacgccgtct ctgcaaagcg 360  
 cctctcggag cttgaggaga aggtcattgc actcctgaca aaacccgcat caatgcctgc 420  
 tgat 424

<210> 1159  
 <211> 439  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-056-Q1-E1-G4

<400> 1159

accacgcct ccgaccacgc gtacgctcct accccacccg ccacccgtcg acgccgcct 60

ctctcctcac ccgctcggag agtcggagcc cggcggccgg agggcgacgt cgtccctaata 120  
aaataactaat aatttatcac tatacataac caatatataa gccatgggca agcgacgcgt 180  
cnctcggtac cctgaggacn angacaaagg cggctgctgc ggctgcctgt gctggtgctg 240  
ctgcttctcg ttgttcatcg tggcggcgct ggccggcacg gccgcctact tcttcttcgt 300  
gtacaagccc aaggcgccgt cctactccgt gagcaacatg tccgtctcgc agttcgactt 360  
cagcacctcc gacctgacgc tgtacgtcaa gtcaccgcc tccgtgcgcg ccgagaaccc 420  
caacgagatg atcaccatc 439

<210> 1160  
<211> 441  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-G6

<400> 1160

cgcgcgtaag ctctatccg cacaccttga gaatcgactc gtgactcact catcgagggtt 60  
ggggccagtc ggaggttcag ccgttctgt tcttgataaa acgagagaag gatggcagtg 120  
tttcagggag ctgtcctatt cttgtttctc ctctcgtcgc cagcagaggt gggaaccatc 180  
gatgccaaaa tgggagtagc catgcccatg catgccttga taatggagaa agcgaaacag 240  
caggagacgg agaagaagga ggagaaaagc acggagaagg aagagagtca atgcttatcg 300  
ccgagtctcc agttcgaggg cttctgcttc aacagcgaca gatgcgccga ggtgtgcatg 360  
aaggagagct ttcccgttgg cgagtgcagg cgggacgtgg ccatgcgcaa gtgcttctgc 420  
aagaagcctt gctagttcat c 441

<210> 1161  
<211> 291  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-E10

<400> 1161

cgacacaggc ctccaagcga gccaaagccag cgcgaccagc gaggagtgc ctgttgcttg 60  
gggagtcctgt aatcatgctt ttcacgtcca ctgcgtcagc aggtggctta agactcgtca 120

agtgtgccca ggggagaaca gtgggtggga gttccagaga tagggccacg agttcctggg 180  
cacgctcatg tgatgttggg gcttacttct agtgagtgct accactcgag tgtagttttt 240  
tctgcgaggc agctccatcg tttaacgcct tggetgcgtg caggtagcag a 291

<210> 1162  
<211> 127  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-E9

<400> 1162

acgcgaccag cgaggactgc agtgttgctt ggggagtctg taatcatgct tttcacttcc 60  
actgcatcag caggtggctt aagactcgtc aagtgtgcc aggatataat agtgagtggg 120  
agttcgt 127

<210> 1163  
<211> 261  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-F4

<400> 1163

gacgacaacg tgtcctaaga ggacaagctt tgtttgcctg gggaaacaca attagctggg 60  
agacgagcat tctcagtcac agaaaatttc cctgggccgg attgagcatc cgtcacgtgg 120  
gagctcttca cgatgaactt atccccactt caattcatac ccctggatca ccctagtctt 180  
gtgatgtcgc gatgggtgaa gaggccatag acgccatctg caagagcgac gggacagcac 240  
cagagtgaga agattgccat c 261

<210> 1164  
<211> 417  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-C4

<400> 1164

gggaatatat agttcgtgaa tccctgaagc gtgcatatat atattcctgc cacgatgaag 60

gtaatggagt cgtcacgcag gttccagccg ggcgtcatcc tgcgtctect gtcattgtg 120  
 tccaccgata tggcacaggc aagggaattc caaaagtaca gtgagcgatt tgttggggca 180  
 tgcattgatc cagacaactg cgccaatgtg tgccgcggtg agggcttctt ggccggcagg 240  
 tgcagcacct tccgccgccg ctgcatctgc actaggcagt gctaaacaag atcgctcgat 300  
 cgcttgccat gcatcgacaa cctattctta ataacgttca ttatctcggt cttatttatg 360  
 acgaatgtca tgtatgttct ggtgactgtc atgtatattc tgatgactgt catgtat 417

<210> 1165

<211> 161

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-056-Q1-E1-A4

<400> 1165

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 ccatcagcag cacaccatcg gcgtcggcga cgactgcac tccatcggn cccggagcaa 120  
 gatgatccgc atccatggcg tcaagtgcgg gccaaaggcca c 161

<210> 1166

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-A5

<400> 1166

cgcgtgagga tgcttcggg aagccgtggc gcacctcag gccctctccc ggcacttctc 60  
 cgacgccagg ttctcgagg tcaagtctg gctcacctcc acgctcggcg gcaccgccac 120  
 ctgcgaggac gctgcaagg acgccccgt cagcgacatc aagaacgtct gcataaccaa 180  
 gagcttcgag ttgagaagc tgctgcgct cagctggac ctcatcacg aggttccgg 240  
 ctccatgtcg gccgaggtcg cactgccgcc gtcggatgcg tcggcgccgt ccggagggta 300  
 cggctcgtcg gctggcgccc ccgcctacgg cgcctcgtct cctgatgcc cagcttatgg 360  
 cgccagcgta ccagcgccag cgccgagctc ggggcagagc actgcttcca ctgcatga 418

<210> 1167  
 <211> 128  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-A7

<400> 1167

ccggggccac ccacgcgtcc ggatacgccg gcgacatctg gagcttcggc ctcagcatcc 60  
 tcgagttcta catgggccga ttcccgctgg gcgagaacct ggggaggcag ggcgactggg 120  
 ccgcgctc 128

<210> 1168  
 <211> 429  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-B12

<400> 1168

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 aggaccgtta tgaggccacc acaagttctt agggagggaa caaagaagac agtttttgtt 120  
 aactttatgg atttgtgtaa aacgatgcat aggcaacctg agcatgtgat gatgttttta 180  
 cttgctgaaa tgggaacaag cgggtcactt gatgggcagc aaaggttggt gatcaaagga 240  
 agatttgccc ccaaaaactt tgaagcaatc ctgaggagat acatcaatga gtacgtcatc 300  
 tgcaatggat gcaagagccc tgataccatt ctgtccaagg aaaatcgtct gttcttcctt 360  
 cgctgcgaac agtgtggatc ttcaaggtec gttgctccaa tcaaagctgg attcgttgct 420  
 caagtcggt 429

<210> 1169  
 <211> 251  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-B4

<400> 1169

gcccgttca accactgcct ggagcagtac ggcggcgccg ccgacctct ccgggacgcg 60  
 ctgggcaagc tcaaggcgaa gatctacggc aagggcattg agcagctgac cgccgcaatg 120

ggcgctccg agagctgcga ggacgcgtgg aacggcgatg aggaggatgt ccccgtcgcc 180  
 gcgcacgaca gggagtacgg tcggatggcg cagatcgccg tcggattcag acagcacgcc 240  
 gccgtcgccg c 251

<210> 1170  
 <211> 441  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-056-Q1-E1-B8  
 <400> 1170

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 aagataagat ttcaactttt tttcccctgg atcgatctca gattaggagg agcaaataaa 120  
 gcaagaatag aaagattttt gggggagaag gcatgatgct ggaaggggaag tcctaccttg 180  
 tgtcacgctc cgtgccgagc tcctgcgagc cggaggcgga gtgggagtac ctgccccacg 240  
 cggtcctcag cggcaagcgc ccggcgccgg aagatgacgt cgaggtcgaa gacccggacg 300  
 aaactggcag cggcggcaag cgcagcaagc cggcgtctcc gcagccgcac acgccggaca 360  
 tctgcgaggg ccacggctcc aaccgccacg ccactggttc cggagagcag cggatcacccg 420  
 ggagcaaccc catgacttcg a 441

<210> 1171  
 <211> 438  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-056-Q1-E1-A3  
 <400> 1171

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 gacaactgca ctggtctcca gggcttcctc gtcttcaacg ctgttggtgg aggaacgggc 120  
 tctggccttg gttccctcct cctagagcgc ctgtctgttg actacggcaa gaagtcgaag 180  
 cttgggttca ctgtgtaccc ttcccccaa gtttctactt cggtagttga gccatacaac 240  
 agtgtactgt cgagcgattc cctcctcgag cacactgatg tggctatact gctggacaat 300



gagggcatct acgacatttg ccgccgatcc cttgacattg agcgcgcaac ctacaccaac 360  
ctcaacaggc ttgtgtcgca gggtatctca tcgcttactg cctccctgag gttcgatggt 420  
gctctgaacg tggatggt 438

<210> 1172

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-H4

<400> 1172

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cgcggtggtcc accccatcgt caccctcgag gccgatggct catctcccac ctctggcgat 120  
ggtcgtcgcc tgatcagctc caccaaccaa gatgaacttg gagcgttatg ccaacagatg 180  
cactacaaga cgttgtgctc cacgatgacg aactgcctg gggtgactac gccagagcaa 240  
ctcttagatg catccctgcg gattacagcg gtgaaggcag cgatggcgga gatgaagcta 300  
gacaatgcaa taaaatcagg cagtgtctaa ggtaaccgga tgatgtcgtc gctaaagaca 360  
tgcaaggaga gctacgcgtc gctggtagac tccatcaatt acacgcggaa cacgctca 418

<210> 1173

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-A1

<400> 1173

gggtccatgc acgcgtctga acacgcgtct ggcacctcag cgagaactgc aagaggtcct 60  
gcagccctcc tcttcttga agcgaagccc cttgaaatga atgaagcatg catgcatgca 120  
tgtatgcatg cgccggggtg acgtggcggt cagctcaggc gctgagcaag tctatacgta 180  
cgtcgtcacc ggctggccac gcatgcgata accatctgat atggacggga ctatatattg 240  
tagtcctaag aatctgggca ttttctaagc taagtgtttt tttccaaata tagcgtcgat 300  
ggaactccag agtgtaaagg tcacgcagat ggtgtgtttt tcagcgattg aatgggtaat 360  
aataaaaagg catgctggca gttactagta ggagagaggg gaggggggag ggggagggag 420

ggagggaggg ggggggggga ggggg

445

<210> 1174

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-A12

<400> 1174

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gtctcccacc agcggctcct ccgcggtcgc acccgccatc gtcggggccg ccgtggcctc 120

cttcttcgcg tactacattc actgagccgc cggacgagga gccggagccg gagggaagag 180

accaaggtgg ggggagagac ttggctgcgc tgcgctgctc tgctgctccc gcgcattccc 240

gatgcgtggg cgtgctctga ttgggcacgg cgggtggcagt ggcacacctt cgtcttcctt 300

ttgtttgttt tttttccttc ctctttctac ttgattttca tttaacgaat tggatcgct 360

gatgcaccag ttttaatttg tgccctgtta tttgttcttt ccctcgagtg agggatcgac 420

acct 424

<210> 1175

<211> 63

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-E8

<400> 1175

cggtgctct gtacaagggg ttcgacttct acgccaccac cgtgctgtgc gttactttcg 60

cgg 63

<210> 1176

<211> 308

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-C4

<400> 1176

gccgcaagcc gctgcgcggg cactgccggg acagtggaca accgtgaata agtacaacgc 60

cacgatcgac gccagaacgc agcaagcttt cgacggcgtg ggggccggcg ctacggcaca 120  
aaagcgggtcc cacgccgtgg ccgccgtgct gcaacagcag ctgaacatag acgtgggtccc 180  
tgtccaaagc cacgtcttcc ggagaccaga tcacatacct taccgtggcc cccgcatacg 240  
agaaagccgc gggcaccgtc agcgcggcca cgcccgacaa gaagatccgc gccaatgagc 300  
ttcccgtt 308

<210> 1177  
<211> 402  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-C7

<400> 1177

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gtagctgttt cgcctatgat cgttgccgcc gtagtgctgg acaacaatgg cgctgacgcg 120  
gtctcctgca ctgccatccc tagcgtaaca ataagcctag aggagaaaga aaatatcaat 180  
ggggatgttc ccacgatcac ctccggccga agcaacgagg atgaggcggt gttcagtgtc 240  
ggagaatcca ccaaggacga tggccatcgc ttgacgatgg aatgctccac tcccgtctcc 300  
tccagtagcc cttccactcg caagaagcgc ggggcgttca gcctcttcag ggcgatgttc 360  
ctgtccttcg gccggagcga cgacagcatg aagaagacag ac 402

<210> 1178  
<211> 376  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-A5

<400> 1178

tcttgggtct cccaatagtc cgtaatcctg cagtcattct ctccaccacc accaccaagc 60  
tcaacaacag ccagctcgcg aaaataatga agagccgcag catggcatca tcggccgcgc 120  
tcttgggtgt agccctcgcg ctagtggcgg ccaccgcccc acaggtagcg gaggcaaaga 180  
agaagagagc ggcggagagc ggcgaggcgg cggaggcgaa gaagatccag gacgacttct 240  
gctcgacgct gtgcgagggc aagaagggga cggacctggt cgtgtgcaag gagtcctgcg 300

cgctctccca gcagtcacaac ctggtgctgt acggcaggat ccagtgaag ggcaagtga 360  
ccgagcagaa gggcat 376

<210> 1179  
<211> 386  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-053-Q1-E1-A9  
  
<400> 1179

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agatacccgg cggcggcgat cgatggctcc gcgcagctca tcggcggcga cgtgcctgtg 120  
cctcgctctc gccgcggcca cgctggcgct ggcccacggg gcgcaaggag gaggaccatc 180  
ggcatcggcg gcggacctgg acaaggtcac ggccgagacc ttcttgga tgcagatcga 240  
cggcaagcct gcaggccgga tcgtgctggg actgtttggg gacaccgttc ctaaacacgc 300  
agagaacttc cgagcacttt gcacagggga taaatgaatt gccaaagtcg gcaagcctct 360  
gtggtacaac gggtcgacgt tccaca 386

<210> 1180  
<211> 287  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-053-Q1-E1-B10  
  
<400> 1180

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cgcgggctgt ccatcgagtt catcgccgtc atgtacgggc tgttcggcgt catgggctac 120  
gtcgcgttcg gcgacgccac tcgggagatc atcaccacca gcctcagagc cgggtcgggtg 180  
tcggccgccc tgcagctggg gctctgcac atcctcttct tcacatgcc ggtgatgatg 240  
aaccctgtgt aggaggtcgc cgagcgctg ctccagagga agcggta 287

<210> 1181  
<211> 367  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-B7

<400> 1181

gggtcgacca acgtccaaca cacttctggt caactggagc ataaccttta tgtgcctacc 60  
tcaaataccaa tttaaggcat tgtcaacctt tttaacaaat aaattgacct tatccccggc 120  
aagtacccat attggaatag gacaaaagga gctgatcatt tctttgttgc ttgccattac 180  
tggggggcctt acacaacaaa attgcatgat gaattgcgga agaactat taaagctctc 240  
tgcaatgcag atctctctga aggatttttt atccgtggaa aagatgtttc ccttccagaa 300  
acattcctta ggtcaccaat acgaccteta acagatattg gaggaatagc acctgcgcag 360  
aagacta 367

<210> 1182

<211> 61

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-H10

<400> 1182

ggccgaccca atcctccaca actcgttgct ggagtagtga tcccggccga tcaccattcc 60  
a 61

<210> 1183

<211> 448

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-A11

<400> 1183

actcgcgggc cgatacaagc ctctacacag acgtcgtagc agcgcaagct catggccgac 60  
gccgcggctg aggccacgta caagcatgac ccggtcgagg tcgccaacca acttaaccgt 120  
gcagtccaca gatccgtcga gaaggaggac attggcacga ggcgggagat gatggggacg 180  
acgacgagga agtctaagtt cagcgggccg tgcagggcga cgaacccgat cgaccggtgc 240  
tggcggtgcc ggcaggactg ggcgacggac cggaagcgcc tggcgcggtg cgccaagggg 300  
ttcggggcga acaccaccgg cgggctggcc ggcaagttct acgtggtgac ggacggcacc 360

gacgacgacg tgggtgaaccc ggcggccggc acgctccggg ggggcgtcat ccagatcgag 420  
ccgctgtgga tcaccttcgc caagaaca 448

<210> 1184  
<211> 175  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-G1

<400> 1184

gcccaggccc ggtccaggtc caagcgacgg cgcgccaag gtcacggaga ttcagggtcac 60  
cgtcgccttc agccacttcg gcaacgggct ggtgcagcgg gtgccgcgct ggcgtcacgg 120  
gttcttccag gtggtgagta acgactacac acacgggctc aggtacgca tcggg 175

<210> 1185  
<211> 349  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-D4

<400> 1185

gcgtccagcc aaaccggagc acagagcttg tgtgtctggc tgtctccggc cggccgggct 60  
tgtcgtacgt cctccaatct gttgacggtc aggccctcta gcttttcttc ggcgttctgg 120  
agacagagcg agagcgagag agagagagag agagagaggt acacggagat ggagtgcctg 180  
ctggggctgc tcaaggtgcg ggtggtgcga ggagtgcacc tggccatctg cgaccgcctc 240  
accacagca ggcacccta cgtcgtcctc cgccacggaa agcagaaagt gggatcaagt 300  
atcaaatagc gcacgatcaa ccagaaatgg aacgaggagc tcaccctgt 349

<210> 1186  
<211> 426  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-052-Q1-E1-B9

<400> 1186

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gacgacgaca ccacgagccc caagaagaga gccatcgcg ctgctgatga cgattgcaag 120  
cctgccggtg acgagtcaac gtcgtggaag cgctcgtgg acggtatgcg cccgctccgc 180  
ctccgcgggc agctggagta ctacccgccg ccaccgccgc caccgccgct gggccacgcc 240  
gatgtgtacc atgacgtgat cctcccgccg ccgtcgcagg cacggttcgg cttcgagatc 300  
aaggagggtg gcatgaccag ccgctacgcg tccgctgagg atctgcacca gatggacagc 360  
gaccaggaag aggggtgctga nggtggcgat gacggtgaca gcagtttgcc acacgcatcg 420  
acatgc 426

<210> 1187  
<211> 404  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-026-Q1-E1-E2  
<400> 1187

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tttttttttt tttttttttt tttttttttt tttttttttt tttttttaat caaacatata 120  
ttgttggagt tagatattat ttatagagaa gctacgccac agcgacaata gaactggtag 180  
tatggttggc cattggtggt tgtatatact atcgtcgcgc cgccgcctcc tcctccgtca 240  
tcgtccgacc ccaccgtcca acggcatggc ggccggccgc gacgacgtca atgcatggtg 300  
tgcatcgag ccaggccagc tgcgtgcccc ctggccagcc agccagcagg gagattaaac 360  
cgccggggcg cgcttgggg ctcaattcaa gctgcgggg caac 404

<210> 1188  
<211> 207  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-026-Q1-E1-E3  
<400> 1188

gggtcagcag ctcaatcatc ctacacaca cagctcacac aactccaat atgaaacgac 60  
atgatcacgg cctctggacc tcggctatcg caccgaagac gagaagaaaa acggaacgc 120  
agcgcgagca aaaatcagac actctgctca cctgtgcagg gcagaaggga ccgacctggt 180

cgtgtgcaag gagtcctgcg cgctctc

207

<210> 1189  
<211> 324  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-026-Q1-E1-E4  
  
<400> 1189

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acttcgcccc gaacgagcca ctgtggcagc agaagttttc ccaggcgatg cagaaggtcc 120  
ggatgcttga cgtgctaatc ggcgagggca aaggccaggt aaggaagcag tgccgcctgg 180  
tgaacgggca ggagaaggag cagaagcagc agcagccacc ggaagagcaa ggagagcaac 240  
agccaccgga gctggaggaa gangagcagc aacagccgca tcagccacag cttccatggt 300  
tcctgcagag gcagcgcccc cccg 324

<210> 1190  
<211> 286  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-026-Q1-E1-E7  
  
<400> 1190

cacgactcta gcatgactct tatcatcaag gcgtggaaga acgcgtgcga ggcgacgggg 60  
gtacagaaga tcgtcatccc gccgggcaac tacctgacgg gcgggctgga gctgaagggc 120  
ccctgcaagt cctccatcat catccgtctc gacggcaacc tgctcggcac cggcgacctc 180  
agcgcgtacc aaaggaactg gatcgagatc gagaacgtcg agaacctgtc catcaacggc 240  
cacggcacca tcgacgggca gggaaccctg gtgtggagca agaacc 286

<210> 1191  
<211> 336  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-026-Q1-E1-F1



<400> 1191

cgggtcgata cacgcgtcta cacagaggcc tctataagct cgcacgcgcc ggcaaaatca 60

aaggggttcac cggcatcgac gatccttacg aaccgcogtc ggactgtgag atagtgatcc 120

agtgtaaagt cggcgactgc ccttcgcctg aatcgatggc tggtcacggt gtgtcgtacc 180

ttgagacgaa tggtttcctc caggactaga catggaatgc gatcgatgcg tctgatgtgt 240

atatatgtag cagcagccgg agcggcattg ccaaggctgt gtaatctcat ggctgtcttt 300

ctctttaaga ccaaaacaaa caagagatgg cagtgt 336

<210> 1192

<211> 381

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-F11

<400> 1192

acgcgtctaa cacgggtctaa tgaagcgcaa cgatttctga ccatcccctg acggtttgcg 60

gtggccgtcc aaatccaatc ccaggcgacc atgatctgcg tggacaactc cgagtggatg 120

aggaatgggg actatcccc atcgcggttc gcggcgcaag cccacgcctt cgcgctcctc 180

tccggcgcca agacggaggc gaacctggag agcacgggtg ggctggtggc catggcgggc 240

aaaggcgtca gcgtgctcgt cccgccaaac aacgacttct gcaaagtcct gtcatgcatg 300

aacgggctgg aaattggtgg tgaagcaaac ttgactgctg cgattcacgt cgctcaattt 360

gcactcaaga atcggcaaga c 381

<210> 1193

<211> 371

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-F2

<400> 1193

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ggtttgttgt catcacttct ggaccagacg aaagatgcat tcctggaaac accatcgccg 120

tccaagctga catgccatac agtggcctgt catcgttcgg aacagcattt ttgtccaagt 180

tcgaatgttc tcagatgcca catccactgt tagagcacgt gaccttcgtg gacactccag 240  
gagttttatc aggggagaag cagcggacgc agcgcagcta cgatttcacc ggagtcacgt 300  
cgtgggtttgc ggccaagtgc gacctcatcc ttctcctggt tgatccgcat aagcttgaca 360  
tcagcgatga g 371

<210> 1194  
<211> 315  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-F3

<400> 1194

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cgctggccat caccaacagc ctccggcgga tcctgaagaa gatggacctc ggcatgttca 120  
gcaaggactc gcgcgcgcga ctgctgtcgt cggagcaaga tgagaaaggc tggcccgtgt 180  
ggatgcggtc gccggagagg aagctgctgg cgtcgggcaa ccagcccaag ccgaacgcga 240  
tcgtggccaa ggacggtagc gggcagttca agagcatcca gcaggccgtg gacgccgtgc 300  
ccaagggcca tcagg 315

<210> 1195  
<211> 299  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-026-Q1-E1-F4

<400> 1195

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tttgtttgtt ttttttcctt cctctttcta cttgattttc atttaacgaa ttggtatcgc 120  
tgatgcacca gtttaatttg gtgccctgtt atttgttctt tccctcgagt gagggatcga 180  
cacctgtacc attgcttgcc atttgtctgg accagttcaa caattcgatt taaccatcaa 240  
aaaaaaagaa agtaacaggc agttcaagaa catcaagcaa ggcgtggaaa cagataacc 299

<210> 1196  
<211> 314

<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-F7

<400> 1196

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 ggaccagcat ggctgactcg tcggagtatg ttagagctca tagctaagcc aagcacaaga 120  
 tgtggactca tcttcaagaa tgattttcat tcgctacttc atcgttaatc gcattttaat 180  
 ttgttttgaa ttgtcattgt acgtcgttta tgacataaaa ctgtttattc atcacatata 240  
 taattcatgt atcgagatat aaaaaagaaa aaaaaaaaaag agagaaagaa aaaaaaagg 300  
 gcggccctct aaag 314

<210> 1197  
 <211> 298  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-G1

<400> 1197

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 ggccgccagc aggttcagcc gttcctgttc ttgataaaac gagagaagga tggcagtgtt 120  
 tcaggagagct gtcctattct tgtttctcct cctcgtcgca gcagatgtgg gaaccatcga 180  
 tgccaaaatg ggagtagcca tgcccatgca tgccttgata atggagaaag cgaaacagca 240  
 ggagacggag aagaaggagg agaaaagcac ggagaaggaa gagagtcaat gcttatcg 298

<210> 1198  
 <211> 85  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-026-Q1-E1-C3

<400> 1198

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 tcctcgaccg gccagcgcaa ttctg 85

<210> 1199  
<211> 269  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-D1

<400> 1199

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acggcagcct cgaggaccgg ctgttccgtc ggggcggcac gccgccgatc ccgtggg'gcg 120  
agcggttccg gatcgccggc gagatcgca cggcgtgct gttcctgcac cagacaaagc 180  
cggagccgct ggtgcaccgg gacctgaagc cggccaacat cctgctggac cgcaactacg 240  
tgagcaagat cagcgacgtc gggctggcg 269

<210> 1200  
<211> 335  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-D2

<400> 1200

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aacaagggttg gccctacccc tgctcttttt aaggctgaaa tgccctggtc agcccgaaga 120  
ggaaatctct cggagaaaca aagagtcttc aaaacgggtga aaggaggttc ctttatagct 180  
tacttgatgc aatgcagtct ctaacatcgc aagctgttgt tattggtgtg agttgccgct 240  
tggtgtcact cttgattgat gtttcaaaca aaaaagatgt cattcctggt tatgtagtaa 300  
tgatcatgca acaccatata aagcacatgt gtttc 335

<210> 1201  
<211> 226  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-D9

<400> 1201

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acaggggtgt acttttttta aatgggcaac cccatttgta gggaaatcca aggggggtata 120  
 tcctttccac gaaaaggatt ggatagatgt atggctatct ttatgttggtg ttctccgacc 180  
 acgggaaaga atggtaattg aaaaacactg tgggtgctata ctgagc 226

<210> 1202  
 <211> 331  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-E1

<400> 1202

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 tgacccgcga gttcacggct cagcaggatg tgctgagcac actcgaggcg ctatgcaagc 120  
 aagcgcgcga ctccgtcctc ctccctccac gacctgccctc cttccgacac ccctcgaccg 180  
 acggcgacgg cgtcgacgag ggtacagccg tctccggcgg gcggaagcac gtgtcgttcg 240  
 gcgacctgag cttcgcgag tgggcgtcgt tcctggagag gttcgagcag ctgctgccgg 300  
 cggcgctaga agccaagaag cgcgctgggc t 331

<210> 1203  
 <211> 78  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A3

<400> 1203

aaatctcaag aactaccga aactttggcg acagataact ctgcattaac tgataagttc 60  
 aaccaacagg cacatgta 78

<210> 1204  
 <211> 253  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A5

<400> 1204

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atcgagaccg acgcggcgcc catcgacccc aagtacaaga agacgatcag cgacgcgtgc 120  
gacggcaagg actcgggctc cgtcccatg gactccacct cgcccaacga cctggacggg 180  
agctacttcg gcctgggtgt ggagaagaag atgccgctca ccatcgaccg cctgatgggg 240  
atgggcaaga aga 253

<210> 1205  
<211> 382  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-026-Q1-E1-B10  
<400> 1205

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ggcatgttcg catcgccgc aaagagatac agcaacggca agaattttct ccgcagcgcg 120  
ggcgtgtgct gttgttcgcc gtccgcctcc gccagcttg gtggtgtgcg cggcaaggaa 180  
gagacatcga cgtcggcgcc agctttcgcg ccgatagca acaagaaaag gtggaggaag 240  
aagaggttct ggagaaagaa gatgaaggcc aggaaggaga tcggcgggct ggtggacctc 300  
gtcaacgata ttctggccaa gtcagaggag agcctaaggg ttagcaacca aaacatgccc 360  
agcagggcgc tgacgttcag tc 382

<210> 1206  
<211> 362  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-026-Q1-E1-B12  
<400> 1206

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ccgcacgcca acttcaccgt ggaccgcctc atccagatgt tcggcgccaa ggggttcacg 120  
gtgcaggagc tgggtggcgt gtccggcgcc cacacgtgg gcttctccca ctgcaaggag 180  
ttcgccgacc gcctctaaa cttccgcagc cagggcgggg agccggagcc gttcgacccc 240  
agcatgaacc cgtcctacgc cagggggctg caggacgtgt gcaaggacta cctcaaggac 300  
cccaccatcg ccgcgttcaa cgacatcatg actccgggca agttcgacaa catgtacttc 360

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362

<210> 1207  
<211> 309  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-026-Q1-E1-B2  
  
<400> 1207

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acatcagcca tgggcgcctg cgcaaccaag cccaagacgc ttgaggggca ggccccagct 120  
gaggccgccc tctccacacc caaggttgcg cccgaggcca ctccaatctc cgttgagggtt 180  
gcggctgatg aacaggtagc tgagaaggtg gtggtggagg agccggctgc ggcgcccgac 240  
gttgagcatc agaaggctaa tgaggtgctc gctccagagg cggccgctgc cgagcccgac 300  
cacaaggag 309

<210> 1208  
<211> 298  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-026-Q1-E1-B3  
  
<400> 1208

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aagatcgggg acttcgacat ctcaaaccag gccctgaca tggctgcgcg cctccactct 120  
actcgcgttc ttggcacctt tggctaccat gcaccagaat atgccatgac tggacagctt 180  
agcacgaaga gtgatgtcta cagctttgga gttgtgctgc tggagctttt aaccggtcgc 240  
aagccagttg accacacact gccccgtggc cagcaaagcc ttgtgacatg ggctacac 298

<210> 1209  
<211> 290  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-026-Q1-E1-C1  
  
<400> 1209

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gatgccattc ctcccttttga gactacacgg tcaggatgca gtcctgggct cctggcattg 120  
agttccttga ggatatctgt tgagaaagcc aagaatttac tccagtattg ctgagagagt 180  
agcaagcttt acttggctgt tacagcagaa agcgttctaa caaaatttga gaattcaaga 240  
caaggacttc tggaaagcct tcaccaagta gaagaaacaa ttccggaagc 290

<210> 1210  
<211> 417  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-C11

<400> 1210

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ctttctctcc cggacgtcga tcgtgttctt cagcacgggc tagctagctc cctccctccc 120  
agccatggcg acgccggaca acaaggggca cgggcatccg ctgcccaggt ttggggagtg 180  
ggacgtgaag aatccggcca cgtccgaggg cttcacgctc atattccaga aggcccgcg 240  
cgacaagaag accaccaccg gccctggggc tgggaacgcg cgcgcaggca ttccgccggc 300  
cttcaggaac ggcggcgggc acggcgggta caggcccagc ttggcgagcg gcaaccagta 360  
cacgccccc aaacggaaga agtgggcctt ctgtggctgc tgaatcgaag ctgctg 417

<210> 1211  
<211> 378  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-C12

<400> 1211

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tttcaccggc acgcaggaca agtgcgcgga gtgcgacaag accgtccact tcacgacct 120  
cctcacggcc gacggcgctc cctaccataa gacatgcttc aagtgcagcc actgcaaagg 180  
gatcctctcg atgtgcagct actcttccat ggacggtgtg ctgtactgca agaccactt 240  
cgagcagctc ttcaaggaga cggggagctt ctccaagaac ttcacgccag gtggcaagtc 300



ttcagacaag ggtgaactga caagggcccc cagcaagcta tcatctgcgt tttctggtac 360  
tcaggataag tgtgcagc 378

<210> 1212  
<211> 266  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-G6

<400> 1212

agtgacgtcc gtattaaaag ctgcaagtaa catagtata aggagtttct aaatccaaac 60  
tgcgaggact ggcgcatttt ggcaagtggc ataaagacaa ggataaggaa gatgataaaa 120  
atggggctga ggacggtgaa catgggtccg ttccgatttc agtcttcatg gttgcaagtg 180  
tcctcaagga gaagagagaa aaccagttag aagaatcgag acgactgcat catcgatatca 240  
ggatattgaa cgatgtaaat gggaac 266

<210> 1213  
<211> 394  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-G8

<400> 1213

acaagcctct atattttttt ttttattttt tttggaccac agttccaccg tccagttagt 60  
actctcttat gtactctgat gaatgtctga ctaatgatag atgggtgcaat gctgcatagg 120  
gcacaaatcc aagaacacct cgtatacaac aacctaataa cgaatcagcc aaaaaaaaaa 180  
ttaaccagaa gaccttatta gtcaatcttg aggtcgttgc acgatcaaag attgggtagc 240  
tctctttgat tcttaactct ttcttgtag tcaatcttta ggttgaccca tccaatgaat 300  
gctgacgatg tttatgtacg tggcgctcgt gcggttaatg gatgcccttg ggcggttggg 360  
ccgtcttcgc atgcatgggg gogaagagat aact 394

<210> 1214  
<211> 431  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H1

<400> 1214

cggggtcgccc acgcgtctaa tcgacatcat ctcactccct gtgatgctca gaaccatcgg 60  
cctcgcggggt gtatttggtt cctacgcctt cgtctgctgc ttgtcgctcg tcttcgtgta 120  
cctcaggggtg cccgagacca aggggttccc gctcgaggtc ataatcgagt tcttcaacgt 180  
gggtgccaaa gtcagaagc cggagcagca tgaagaggag gagaaccacg actaaccggt 240  
atatatttgg attcattaat aataactgtt ttttctttct ttctttcttt ctttctttct 300  
ttctggatta tgagttgaat gaatgatgtc gatcagagag cttgatgacc atcatgttag 360  
cgatcccatg aaatatgttt gaggacgcat ttggatgttt ctaaaaaaaaa aaaaaaaggg 420  
ccggcggctc t 431

<210> 1215

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H12

<400> 1215

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cgtcttttga aactgattca tgtgagggtc gtgttgagca gaagaggaaa aatattccat 120  
cagtctctac agcactacta cttggtgggg tgcttggcct acttgaaacc ctactgcttg 180  
ttctctctgc aaaacctatc ttaggctaca tgggtgtaaa accggactct gcgatgatga 240  
agcccgcatg gcagtactta gttctcagat ctcttgggtc tcctgctgtt ctgttatctc 300  
tggcaatata aggagtcttt cgcggattta aggatacaaa gacgcctcta tacgcaactg 360  
tggctggaga tgcgatcaat atagttttgg atccaataat tatgtttggg ttc 413

<210> 1216

<211> 376

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H3

<400> 1216

cgtattataa ataaactctc gccgccgcca tccgagcgaa caagccaacc gaccccgctcc 60  
ccaaggcaat ccgccgccga cgtaccacca ccaccgcagg agcgagatgg agatgaagag 120  
gatectcttc gccgtcctcg tegtcatcgc cgcttcggcc accgcagtgc tggcctccac 180  
cgaggccgcc gccgcgggcg ccccaactgc ctccgagtcg tccgccgagg ctcccgctgg 240  
cgctggcgct ggcgctgccg ctggcgccgc cgccgcgggg ccttcgccca gcagcggcgc 300  
gcccgccctc gccgccgcgc ccgcgcgct cctcttctcc ctctcgcct actacctcca 360  
ctaagcctgt gcgtgc 376

<210> 1217  
<211> 219  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H5

<400> 1217

ataaaaatgg agacaacaac aaaactcccg tggagccgc ccggtcctt cctcctcgtc 60  
tccgcggcgt tcctggcgtc cgccgccgcg tctggcgta acatcggcca gttegacgac 120  
cacttgacga agcggaagga gctcgccgag gcgtctgcca gggaggcgta caggcccgac 180  
ccgtacaacg tcaccaacag cttcaacgcc gccgtccac 219

<210> 1218  
<211> 375  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H8

<400> 1218

cacgcgtcta aaatcggctt gataatggga tgcaccaagt acatggacat ccacagcgaa 60  
cctgcagctg tcatccgtgg cacgaatgga tccgggggca tcaactgtgaa gaatacaggg 120  
caatcagtca tcattgggat cgacgacgag cccatgactc ccgggcagtg taacctggtg 180  
gtgagaaggc tgcgcgacta cctgctcgaa caggggatgt gatgacaacc ctttctcctg 240  
gaatgcatgt tgatgatgtt gctggttcca acttcgtatt cagtaataac aacacagcta 300  
agagcctcct acctacccta attgcttgag cggctcttgt ccgcgccata agataccaac 360

tgttgcactg ggaaa

375

<210> 1219

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A10

<400> 1219

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tgagagcctt gttcctcctg gtcctcttct gcatcgtgca tggtgagaag gaagagtcaa 120

agggcacgca tgcgaaagcg tccgggcctg gtgggtcctt cgacatcacc aagttgggcg 180

cctccggcaa tggcaagaca gacagcacga aggctgtgca ggaggcatgg gcatcggcgt 240

gcggcggcac tgggaagcag acaatcctca tacccaaggg cgacttcctt gtcggacaac 300

tcaacttcac aggcccttgc aaggcgacg tgaccatcca ggtggatggc aatctgctgg 360

cgaccacgga cctaagccag 380

<210> 1220

<211> 407

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-G4

<400> 1220

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gggaattacg gtccggattg gccccacaac cgccctttcg gaattcaaac aacaacgccc 120

gccggttccc cgccgcccgc cgcatgaatc gattaattat tatatatata tatatgcatg 180

ctatctacta tgatcgatcg cttctcgacc ttcttgcac gatctgcatg catattataa 240

tttatattat attgatgcca cgccgcatgc aggtctttcc aaggcgtacg tactatatca 300

aattatttta atttccttac atgtatatgt atgtgctgct gttggatagc tacgtatata 360

tatatgttcc aaggtttccc ggttccggcc ttgttacatg catgaag 407

<210> 1221

<211> 398

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-F12

<400> 1221

gggtcgacgc ccgcgtccag gccgacgcgc tgcacgtgcc gcaccgcccc gagggaggtgc 60

gccgcctagt ccgcctcacc ttgcgcgcgc cgcctctcat catgccctcc tgcttcctat 120

gggactacat caaggtgatg ggctctgatc atatccagga gaaagctgag ctgctatacg 180

ctttgattaa cgggaggcaa ctctgtactc ttccaaaatt gacccagccg acgcttataa 240

tctggggaga gcaagatcgg gtgttcccaa tggagctggc tcacagattg aatcggcatc 300

tagaggggaa ttctcgatta gttgtcataa aaaatgctgg gcacgcggtc aatatcgaga 360

agcccagggg agtgtgccgg agcatcattg agttcttc 398

<210> 1222

<211> 384

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-F2

<400> 1222

tttattctta tcagcgctgg tttcaaacaa ccgaatttta accttcattg accgggggggt 60

taataacatg tcccaacagt taatatacag aatccaacca ataaaaaat gtcaggaaaa 120

aaaagaaaag aaaagtaatt caagggcaac agacatctcc aggtacgagc tgtgcctcca 180

gccctccaca gnacatccga aatgcaggtc aagatctacg ctgcgcgcatc caaaccaa 240

cccttctggt cttctggagg ttctggtcgt gggctcccca ccgacaatga ggctgcgccg 300

gaatcacgga gcggagcgga gatcgccgcg ccggaatccg gacgaatcca tcagatggtc 360

cggccgattc gcgcgagctc cttt 384

<210> 1223

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-F3

<400> 1223

actcgtcggc ccacgcgtcc ggccacatca catcacaggaa agcaagcaag aatcatcggg 60  
 ataatggccc gtgcatgcgt gttcctcgtc gtgctcctcc tggccgccat cgcgggtggca 120  
 ccgttcgcgg gcgcgcgcacg cgtggacgtt gtggagggta ggtccatggc atccgccgat 180  
 gcaccggagg cggcgggcca tgctcccgt cctagccccg actccgcctc atccccagac 240  
 tcgtcatcgg aggcgcctc tagcagcagt tcctccgact agacgcaaaa acctcttcat 300  
 tctctggaat aactaacagt atatacgtt caccctgatg atatagaaac atgtacgtgc 360  
 atcagtgtat ggaatgcgag tggcaaacac atggaatgtg cttgccctaa tattgggta 419

<210> 1224  
 <211> 331  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-025-Q1-E1-G10  
 <400> 1224

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 ctgcgcgagg aacgggcctc agtgctcgcc gccagcagca aggtctctga tgaggcggcg 120  
 gcggcggcta ccgcgggtgcc gcctgcaggt gccaagacct ccagcagcaa cgatgcccg 180  
 gacggcgcca tgggcaacgt gcaggacgag ccgcggcagc agcgccacga tgactatcac 240  
 cccccgaga tcgtccccga gaagatcata cacgaggacg cgttgccggt cgttgctgcg 300  
 gagaaggaga ctgccgcgcg cggcgcaacc t 331

<210> 1225  
 <211> 415  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-025-Q1-E1-G11  
 <400> 1225

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 gcacaattct gatcagcatc tggcagcaag tgctactgag angttaatan acctgttggc 120  
 tcagcagcaa gaagagcttc gtgcgctgca aaggaaacac aaggcggaca tagaggagat 180

gctgaaaatc gtacctgcgg aggatcggga agagacctta actctatgcc gcttgaaggc 240  
 ggaacagaaa aacagagccg ccgaacctta gataaactgt ctcatgtgca tgttcctctg 300  
 tgtgtctgtta gatttataca tactcacacc aaggagttgt tgtttacact ttacagccgt 360  
 tgttgtgcaa aagttggaca tctgttgtgc agaagataag tctgaagcct ttttc 415

<210> 1226  
 <211> 341  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-025-Q1-E1-G12

<400> 1226

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 ttttctccg acatccacag gggggagggg aaaacacgtg cattcaccgc gcggcaataa 120  
 tggcctcggc tccggtccg gcgacgacga ccgccgcgt aatcctatgc ctatgcgtcg 180  
 tcctctcctg tgccggggt gacgaccca acctccccga ctacgtcatc cagggccgcg 240  
 tgtactgcga cacctgccgc gccgggttcg tgaccaacgt caccgagtac atcgcgggcg 300  
 ccaaggtgag gctggagtgc angcacttcg gcaccggcaa g 341

<210> 1227  
 <211> 436  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-025-Q1-E1-G2

<400> 1227

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 ttccaaaacc aaaactgaaa ggactgccca attttgcaaa ttggaataag gacaaggata 120  
 aggaaaatga taaaaatggg gctgaggacn gtgaagatgg tccggttccg atttcagtct 180  
 tcatggttgc aagtgtctc aaggagaaga gagaaaagct gttacaagaa gccagaggac 240  
 tggatgatct tatcaggata ttgaacgatg taaatgggaa cttagatgct aagaaagctt 300  
 gcgctggagc attgaaactt cacaaaaaat acctgaaaaa ggtacaagca aagaaacctt 360

aaacgtgcc a tggaacacac gttcccaatg gggctaacct tacaatttca catacacgac 420  
aatttccaca cacaac 436

<210> 1228  
<211> 369  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-025-Q1-E1-F10  
  
<400> 1228

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tgcagggccg caccgaggtc gagcagatcc acaggatctt caagctctgt ggctcgccgc 120  
gcgaagactt ctggcgccgc ttggggctct cccacggcgc cgtcttccgc ccgcagcaac 180  
cttaccogaa ccgcctccgg gacaccttcg ccgcgtccat gcccgaccac acgttccgcc 240  
tcgtcgccac gtcctcgcc ctcgacgctg ccggccgtgg caccgccgcc gccgccctcg 300  
acgccgagta cttcacgacg gcgccatacg cgtgcgatcc ggagagcctg cccaagtacg 360  
cgcccaaca 369

<210> 1229  
<211> 433  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-025-Q1-E1-D7  
  
<400> 1229

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atcttcccga gcgagttctt ggttgacctc ttcccccttc ggaccacctc caaggctctt 120  
ggtgtagctt gccactctca ccaatcaagt tttcatgtct gatctcgaca ttcagatccc 180  
aactgccttc gatcccttcg ctgaggccaa tgctggggac tctggtgcgg cagcagggtc 240  
aaaggactac gttcacgtgc gcatccagca gcgtaatggt cgcaagagcc tgactaccgt 300  
ccagggattg aagaaggagt tcagctacag caagatcttc aaagatctca agaaagagtt 360  
ctgctgcaat ggtacagtgg tccaggaccc agaacttggc caggtcattc agctccaagg 420  
tgatcagagg aag 433



<210> 1230  
 <211> 422  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-E11

<400> 1230

aataactctat actgacgtcg tattaactg gtgctttcag atatttcagg ctcttgctta 60  
 catgcatcag aggggctact ttcacgtga cctcaaacct gagaatctgt tagttagcaa 120  
 agatgtcata aagctagcag acttttgtct tgcaaggga gtttcacat tgccgccata 180  
 tacagaatat gtctcaactc gctggatcg ggcaccagaa gtattgctcc agtcatctgc 240  
 ttatgattct gcagttgata tgtgggcaat gggtgccata atggctgagt tgttgacact 300  
 ccacctctc tttcctgtaa ccagtgaagc tgatgagatt cacaagatat gcaatgtcat 360  
 cggtagtcca gatgagcaat cttggcctca aggattgtca cttgcagaag caatgaagta 420  
 tc 422

<210> 1231  
 <211> 415  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-025-Q1-E1-E12

<400> 1231

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 gcaagagcaa gaccgacaac gtgaaggcga tgcccaacac actgggtgctg tttcacgtga 120  
 tcaacgccac tgtcgccgga atcaactac tcaactccaa gttcttccac atcaacatcg 180  
 acaactcaga gagcatcacc gtgaaggacg tgaacgtcac cgcgcccgcc gacgttgaga 240  
 acacggacgg cgtccacgtc ggaggctcct ccaagatcag catcctcaac tcgaccatcg 300  
 gcaccggcga cgactgcgtc tcgattgggc ccgggtgcaa cggcgtcttg gtggacagca 360  
 tcacctgcgg ccccgggcaa ggcacacgcg tcngctgcct aagccgtac aagga 415

<210> 1232  
 <211> 425

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-025-Q1-E1-E2  
  
 <400> 1232  
  
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 accggcgga ggaccggaac acatctgcgg cattaccggg acggcgtgaa cgacgcgccc 120  
 gcgctgaaaa aggcggacat cggcatcgcg gtggacgacg cgacggacgc ggcccggagc 180  
 gcgtcggaca tcgtgctgac ggagcccggg ctgagcgtga tcgtgagcgc cgtgctcacc 240  
 agccgcgcca tcttcacgcg catgaagaac tacaccatct acgccgtgtc catcaccatc 300  
 cgcacgtgc tgggcttcct gctcgtcgcg ctggtctgga agttcgactt cgcgccttc 360  
 atggtgctca tcattgcat cctcaaccaa cggaacatca tgaccatctc caaggaccgc 420  
 gtgaa 425

<210> 1233  
 <211> 384  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-025-Q1-E1-E4  
  
 <400> 1233  
  
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 ggcgcgtggg acaccacaac cacggcaagt tcacggccgg gccgtggaaa cccgcccacg 180  
 cgaccttcta cggcgggagg gacgggtccg gcaccacggc gggcgcgtgc ggggtacaagg 240  
 acacgcgcgc gcaggggtat ggcgtgcaga cgggtggcgt gagcacggtg ctgttcggcg 300  
 acggcgcggc ctgcggcggg tgctacgagg tgcgtgcgt ggacagcccc agcgggtgca 360  
 agcccagcgc gggggcgctg gtgg 384

<210> 1234  
 <211> 429  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-025-Q1-E1-E8

<400> 1234

ctcgcgggtc gatacaagcc tctacacaga cgtcgtgtga agagagaggc agaggcaggc 60  
ggccgggtgca tgcattgcccc gccctccctc cgtgcgcccc cgaagacctc ctccgcccc 120  
ggcgcggtga gctcgtgacc gcccgagcgg caccgcctc tgcggtttga agctcgctgc 180  
aagcactcca attaaacaaa agaagccacc atggcggtta attctccgga ggagatatgg 240  
ggggacatct aactgtgtaa aatatcggtg gaggaggtgt tcacgacact gaaatgcgac 300  
cgcaaggggc tgtctagcac agagggcgag aaccggctca tgacgttcgg gcccaacaag 360  
ctggaggaga agaaggagaa caacctcctc aagttcctgg gcttcatgtg gaacctcgctc 420  
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<210> 1235

<211> 427

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-E9

<400> 1235

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gtcgtgaaggc aagtgagcaa gctatatata tatatatata tatatatata taggagattc 180  
ttcgagcgag ctagtagcga gatgggttcc gccgtcctct tttactgcat ctgcatcgcc 240  
gccgtcgtcg cattgtcgtc gtccatggtc gccgtcgggt ccgcccggccc gggggaaaac 300  
cccaagttca tctcggcgag cgcccttgag tgctccgcta acgtaacgga aatagcaaag 360  
gcgcgcaagc tgatcgatgt caatggccac gggctgtgcc cngtgcgggt cgaccacacg 420  
cgcgggga 427

<210> 1236

<211> 396

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-C1

<400> 1236

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gcaccgagca gaagggcatc acggcgccgg ccatgaaggt ctgccaggan gagtgcgaca 120  
aggcgtacgt ggtgaaggcg gccgaggtca ccaaggcctg cagcgtcacc tgcgccaagg 180  
agaagaaccc gcgcctcagc gagaactgca agaggctcctg caccctcctt ccttcttgaa 240  
gcgaagcccc ttgaaatgaa tgaacctatg atgcatgcat gtatgcatgc gccggggtga 300  
cgtggcgctt agctcaagcg ctgagcgagt ctatacgtag gtcgtcaccg gctggccacg 360  
catgcgataa ccatctgata tggacggaac tatata 396

<210> 1237

<211> 354

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C10

<400> 1237

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tggagagccc gcgggtgaag tacggcgacg gcgagatcca gtcggagtac cgctacgaca 120  
ccaccgaagt cgccccgccg gggaatggcg gcggcgccgg gtgggtggtg cgcccaaagt 180  
ccgtcaccta caacttcaag accagcacca acgtcccaaa gctgggggtg atgctcgtcg 240  
gatggggcgg caacaacggg acgacgtca cgcccggggt gatcgccaac agggaaggga 300  
tttcgtggga gacgaaagag aaggttcaca aggccaaacta cttcggtccc ctga 354

<210> 1238

<211> 268

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C11

<400> 1238

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gtggaaacag aacagaccca ccaacctg caaactcggc gtcgggaatg gccttgaccg 120  
acaattgcaa gctcaatttc aagaagctca ggtcaaagcg aagcttccgg ttcacacgt 180

tcaagatcaa cgagcagacg cagcaggtgg tggaggacac gctggggcag cggggccaca 240  
cctaagacga attcaccggc tccatgcc 268

<210> 1239  
<211> 423  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-025-Q1-E1-C12  
  
<400> 1239

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ggcgccgtg ctagcgggtg ccgccgatgt cgccaacgcc ggccacgcca agcccctgac 120  
gcctggcggg cgcgtggtac accacaacca cggcaagttc acggccgggc cgtggaaacc 180  
cgccacgcg accttctacg gcgggcggga cgggtccggc accacggcgg gcgctgctg 240  
gtacaaggac acgcgcgcgc aggggtatgg cgtgcagacg gtggccgtga gcacgtgct 300  
gttcggtgac ggcgccgctt gcggcggtg ctacgaggtg cgctgctggt acagccctag 360  
cgggtgcaag ccagcgcggc cgacactggt ggtgacggcg accgacctgt gcccgcccaa 420  
cga 423

<210> 1240  
<211> 447  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-025-Q1-E1-C2  
  
<400> 1240

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cctcaagctc gccgagtact tcaacgtcac cgacgggggtg ttcagctaca accagatggg 120  
cgacgtgccc ccgcccgtta acgggccact ccatgtcatc cccaacgtca tcaccgccga 180  
gttccggacc ttcctcgaga tcgtcttcga gaaccccgag aagagcatag actccctcca 240  
cctcgacggc tacgccttct tcggcgctcg gatggggcct gggacgtggt cgccggagat 300  
gaggaagacg tacaacctac tggacacggt gagccggcac acgatccagg tgtacccgcg 360  
gtcatggacg gcgatcatgc tgacattcga caacgcgggc atgtggagcc gtcgggtcaa 420

cgtctgggag cgtactacc tcgggga

447

<210> 1241

<211> 328

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-C3

<400> 1241

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cacaaactgc cccgtgggca gcagagcctt gtgacatggg ctacaccgag gcttaatgaa 120

gacaagggtga ggcaatgcgt cgattccagg ctggagacg aatacctcca aaggctgtag 180

ccaagatggc tgctgtggcc gccctctgcg tgcaatacga ggggtaattc cgtcncaaca 240

tgagcatcgt cgtcaaggct ctgaaccctt tgctgcacag ccggtctggc aaccgccta 300

ctgcctcgtc ggctccac gctgccgc 328

<210> 1242

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C4

<400> 1242

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ggagcaggcg ggcgccgaa ggtactggtg ccacatgtgc gccgcggccg ttagccccgc 120

ggagggcgaa gtggagatga agtgcccgtt ctgccacagc ggcttcctcg aggagatgga 180

gaccgccccg ggggccgga ccgacgacg tgacggcgac ggcgacggcg cgggtggctca 240

ggtgcacccc ggcgccgacc gcccgagctc catctgggcy cacgtatcc tcagcacggt 300

cgacagctcc gcccgtcgcc gccgcaaccg gcggcagcag gaggccgcca gcgacgtcta 360

cgactggaac gaccccgagt tctcgtgcy ccggcggcgc gtcaccgct tc 412

<210> 1243

<211> 398

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C5

<400> 1243

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ccgcggcccc cgctcgaggaa gaagaaggga taggagacgg agacggagac ggagccggtg 120

gtcgcaagga tggccggggg catgcaggcg gcggacgcgg cgggcccggct gagcgcgctg 180

ctctcgctgc tcgcgctgcg ccggctcttc gccgtgctcc agccgctggc cctgctcttg 240

ctcctgccct tccggtggcg cgcgcggccg gccggggccg tggccgcggc cgtggcgctc 300

gatgccgcca cggcctccgc gccggggggc agcgggagga acgtgaatgc gtcacgctcg 360

tcgtcggtgg ttctgcgggt gccggccggg tcccccat 398

<210> 1244

<211> 450

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C8

<400> 1244

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gcgcggcgtc ggccgccaac ggggcggggc cccggcggcg ggggtgggcg cgggcgcgga 120

tggggcggtg cagcgaggcg tccacctcgg gtctgccgcc gccgccgcg cgcgcgcagg 180

aggcggcgga gtcgtcgtcc gggggcagga ggcgagggcg caaggtggcg ccggagccca 240

aggagccggc ggaggagggg accgcgcgcg tgccgccgat gcccggtcgc ccagcttca 300

ggtactactg ccagaagaag acggcgggcg tcgacaggat cgtggccgac gccgacgcg 360

ccgacgccga tgactccgtc agggtcagag ccacggtgcc tcacctgaac aacaggtgca 420

aatcacggc gaccaaggca cagattcta 450

<210> 1245

<211> 360

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-D1

<400> 1245

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ggttacatcc gtatggagag gaacgttaac gccagcactg ggaagtgcgg gatcgcgatg 120  
atggcgctcct acccgacgaa gaagggcgcg aaccctccca ggccgtctcc aaccccgcca 180  
acaccgccgg ctgcccctga caatgtctgc gacgagaact tctcgtgctc cgcgggcagc 240  
acctgctgct gcgcgtttgg cttcaggaac gtctgcttgg tctggggctg ctgcnctgtc 300  
gagggcgagg nctgctgcaa ggatcacgcn agctgctgcc cgccgggcta cctgtctgc 360

<210> 1246

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-D10

<400> 1246

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taatggagtc gtcacgcagg ttccagccgg ccgtcatcct gcttctcctg ctcattgtgt 120  
ccaccgatat ggcacaggca agggaatgcy agaagtacag tgagcgattt gttggggcat 180  
gcatgatcgc agacaactgc gccaatgtgt gccgcgggta gggcttcttg gccggcaggt 240  
gcagcacctt ccgcgcgcgc tgcattctga ctaggcagtg ctaaacaaga tcgctcgatc 300  
gcttgccatg catcgacaac ctattcttaa taacgttcat tatctcgttc ttatttatga 360  
cgaatgtcat gtatgttctg gtgactgtca tgtatattct gatgactgtc aagta 415

<210> 1247

<211> 426

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-B9

<400> 1247

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tcctcctcct cctcctctct ccaacacccc atccatcagc gctgccctcc gcattgctct 120



tgatcccatc cagtacatcg attctccccc caagatcaaa ggccggagga ggaagaaagg 180  
 ttanggagtc ggccatggga tgcttttcat gctgctgtgt ggcagatgac gacaacgttg 240  
 gcaggaggaa gaagcatgac gatccctatg ttcctatccc tgctcatggt tataattttg 300  
 gacctagccg gtccccagcc ccaacccctg tcatctccac tggcagagct cagccaattg 360  
 cagtaccggc cattcatctg ggagagctga aggaaattac anaaaacttc agcagtgatg 420  
 ccctca 426

<210> 1248  
 <211> 401  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-A12

<400> 1248

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 ggctgcccgat gtcgccaacg ccggccacgc caagcccctg acgcctggcg ggcgcgtggg 120  
 acacgacaac caccgcaagt tcacggcccg gccgtggaaa cctgcccacg cgaccttcta 180  
 cggcggggcg gacgggtccg gcaccacggc gggcgcgtgc ggggtacaagg acacgcgcga 240  
 gcaggggtac ggctgtcaga cgggtggctgt gagcacggtg ttgtttggcg atggcgcggc 300  
 ctgcggcggg tgctacgagg tgcggtgcgt ggacagcccc agcgggtgca agcccgacgc 360  
 ggcggcgctg gtggtgacgg cgaacgacct gtgcccgcgc a 401

<210> 1249  
 <211> 125  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-A2

<400> 1249

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 ccgga 125

<210> 1250

<211> 317  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-025-Q1-E1-A4  
  
 <400> 1250  
  
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 aaccttcgcc ggcaaaagca tggcaatggc ttaccgtgtc ctggagggtca ccctgggtgtc 120  
 ggaaaatgac ctcaaaaaag tgctcgtctt ctcccgact cgcactctac cctgggtctc 180  
 catctccgga ttcgacctcc gcatcccttc caacagcacc caagcaggac acagcaacgg 240  
 ctgcaacccc tgctggaaac ccgtggtaca cttccccatc ccggtgccc ctgacacccg 300  
 cgggctcgca ctccacg 317

<210> 1251  
 <211> 396  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-025-Q1-E1-A5  
  
 <400> 1251  
  
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 agcaagctat atatatatat aggagattct tcgagcgagc tagtagcgag atgggttccg 180  
 ccgtcctctt ttactgcac tgcacgccc tcgtcgtcgc attgtcgtcg tccatgggtc 240  
 ccgtcggggc cgccgccccg ggggaaaccc ccaagttcat ctggcgagc gcccttgagt 300  
 gctccgctaa cgtaacggaa atagcaaagg cgcgcaagct gatcgatgtc catggccacg 360  
 ggctgtgccc ggtgcggttc gaccacacgc gcggga 396

<210> 1252  
 <211> 404  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-025-Q1-E1-A6  
  
 <400> 1252

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 tgctcgtggca gacgtacgtg gacgagcacc tgatgtgcga gatcgagggc caccacctca 180  
 cgtcggcggc catcgtcggc cacgacggcg ccacctgggc tcagagcacc gcattccccg 240  
 agttcaagcc cgaggagatg gctgccatca tgaaggattt cgacgagccg gggcacctcg 300  
 ccccgaccgg cctgatactg ggaggcacca agtacatggt catccaaggc gaacctggag 360  
 ctgtcatccg tggcaagaag ggatccgggg gcatactgt gaag 404

<210> 1253  
 <211> 397  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-025-Q1-E1-A9

<400> 1253

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 caaggttgca cctgagacca ctaccatcca cattgangtt gcggcaaaac atgcagtagt 180  
 tgagaagggtg gaggaggaca aggaggaggc actaacagtg gcggcgaaac aagagccagc 240  
 agccaccatt gagcctcagc agattgctag tgaggtgacc acttcggaag tggcggtcgt 300  
 cgttgtcgag cctgagaaca aagaggaaga ggaagttgtg gagaagaccg tcatcgagaa 360  
 ngagaagcca tcagcagtcc atgcagagga aaatatt 397

<210> 1254  
 <211> 305  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-B1

<400> 1254

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 gccccacaag tagcggaggc aaagaagaag atacggcaga gagcggcgag gcggccgatg 180

cgaagaagat ccaagacgac ttctgctcga cgctgtgcga gggcaagaag gggacggacc 240  
 tggtcgtgtg caaggagtcc tgcgcgctct cccagcagtc caacctggtg ctgtacggca 300  
 ggatc 305

<210> 1255  
 <211> 425  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-025-Q1-E1-B10  
 <400> 1255

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 cgccatggcg gcaacgacga cggggatgca gatgatgcag gcggcggcgt tgctgctgtg 180  
 cttggttgtg ttggcggcgt ctacgcgggt cgcgctgggc aactgccgcg acgactgcat 240  
 ggctgcatgc aacggctgga ccatcgtctg ccagctctcc tgtgccagcg catgctacgg 300  
 agaagtcggg atcacaacct taggtacgtc ggctgtatta gcgaaagcag aagcgctgc 360  
 atcagcacca caagcagcac aagagcgaag cgccgccgcc ggcgtgtccg cgctcagang 420  
 gttca 425

<210> 1256  
 <211> 291  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-025-Q1-E1-B2  
 <400> 1256

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 ccgccgacga cgccaacgcc atgccacca tcctgacccc cgtggcgcat accccgctgg 120  
 ggtccttcga cggcgacaag cgggcctctg acgacgacgc cgtcgacgac gacgaggacg 180  
 ccgcccctgt cggcgcgccc aacggggcca ccatgactga gccagggac gacgtccccg 240  
 ccccgcccgg ggccgaagca accgcgggcg gcgccgccgc cagcaacgcg c 291

<210> 1257  
 <211> 394  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-025-Q1-E1-B3

<400> 1257

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 acgttgtcaa caacgactac acgcactggc tcatgtacgc cattggcggc ggcgacgcgc 180  
 caaccatcat cagccagggc aaccgctaca tagcaccacc aaacatcgcc gccaaagtga 240  
 tcaccaagca ctacgcggaa gaaggcgtgt ggaagaactg ggtgtggcac acggaggacg 300  
 acctgttcat gaacggcgcc atcttcaatc cgtccggcgg cgcccccaag caggtcgacn 360  
 acaacgagtg ggtaaagccc aagccaggaa acta 394

<210> 1258  
 <211> 443  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-B4

<400> 1258

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 gggtaaaggc cggccgtcat gctggcacac ccgcacggct caagcaccct caaggatgtc 180  
 caggtcgcct tcagcaacgc cgaccacaag gacagcagca gcaaggtgga acagccggcg 240  
 gacagtcctt tgaagccggc gagcctgaac gcgttcgaca tcattctcca ctccagaggg 300  
 ttcgacctgt caagcctgtt cgaggtggac caagagcaga aggccagcaa ctgcggttc 360  
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 cccctcatgg tgaaaaaaca gga 443

<210> 1259  
 <211> 215

<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-B8

<400> 1259

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 ctactaaagg atgaagcaga tgccttttgg tgctttgaga aattgatgcg tagattgcga 120  
 ggaaatttca aatgcacaga tcaatctgtg ggagtatcca accaacttca acatcttgca 180  
 tctattattc aggttcttga cccaaagcta catga 215

<210> 1260  
 <211> 430  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-024-Q1-E1-G6

<400> 1260

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 ctcgtcctcg ccgccttctt cttccaccac cctgctgca cggcgaggg ccgcgccgaa 180  
 aacatctcgg aggtcgaggc cgcggtccgc gcccgcgct cagagctgct ccgcgacgcc 240  
 accagccagc tcgtcgacct gncctcncg gccaaacctt ccggcgcggg cgtccgggcc 300  
 tcggccctca gcgtgcgcag caacgcgctc tgggcccggc gcgtcaacac caccggttc 360  
 accgtcccgc cgcgcgtcgt gccggccccg ttgcgcgcgc gcctcgccat cgtcttcgag 420  
 ctcttcgtgg 430

<210> 1261  
 <211> 406  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-024-Q1-E1-G7

<400> 1261

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gtacatcttc tttgtggcgt cttgcgggttc gaaacagaac tacctccctc cgctgccgcc 180  
gctgacgagg tgcaaccaag actcgggctt cttccgactg tggaagaagg cggcgctgcc 240  
gacgtgccag ggcgcccg atgccacccc gcgcggcggc ggcgggttcgc accacgtcnc 300  
gcggccgtcc atcagccggg gcacgcagcg gctctacgtc cgcctcaaca cgctccacta 360  
cgtgctgacc cacctggagg ccctcgacag ctcgctgtcg tcctcg 406

<210> 1262  
<211> 438  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-024-Q1-E1-G8  
<400> 1262

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gtccccccct tttccgacat tcacaggggg gacaggaaat cagcggccat ggcctcgatt 120  
ccggcgacga ccttcgcgt catcttatcc gtcctcttct gtgcgcggc tggcaccgcc 180  
gtcgacaacg acctccccga ctacgtcatc cagggccgcg tctattgcga cacctgccgc 240  
gccgggttcg tgaccaatgt caccgagtac atcgcgggcg ccaaggtag gctggagtgc 300  
aagcacttcg gcaccggcaa gctcgagcgc tccatcgacg gggtgaccga cggaacggc 360  
acgtacacga tcgagctcna agacagccac gaggaggaca tctgcgaggt ggtcttggtg 420  
gagagcccgc gcaaggac 438

<210> 1263  
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<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
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<400> 1263

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ggcgggtgctc cctccctctt cgtccccag gcacgcaggc aggcgcgcgc gcggccatga 120

agggggggcgg tgccatgagg cgcgcgcta tgttctacgt ccacgaggcg gacgtcgtcc 180  
 agatccacca cttcctcgag gagtgtctcc tctgcgcaa atcgtctctcc ggcgacatct 240  
 tcatgtacag ggggtgacacg ccgttctgca gcgaggagtg cagggagcag cagatcgagg 300  
 tggacagggc gaagcaccgg cggaagaagc gcgcggcggc gcacgcgctg tccgcacgca 360  
 gcagggagca ccggcaccag cagcagctgc agcagcnnac accacagcag cagcaaccgc 420  
 agccgcggaa tgccggcatg gac 443

<210> 1264  
 <211> 383  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H10

<400> 1264  
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 cgacgtccaa gatcttcaac gacgagtcct tcgcaaagat gaagaatggg gtccggatca 180  
 tcaacgtggc caggggtgga gtgatcgacg aagacgtctt ggtcagggcg cttgactccg 240  
 gcaaagtgtc tcaggcggct cttgatgtct tcaccgtgga gccccgccc aaggacagca 300  
 agctgggtgt gcatgagaat gtcactgtaa cccccacct tggagctagt actgtcgagg 360  
 ctcaggaagg cgtcgtctatc gag 383

<210> 1265  
 <211> 396  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H11

<400> 1265  
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 ctctgtatct gcaactgcaa gcaaggaaat taattaaaag aagatcggcg ccatggcggc 120  
 aacgacgacg gggatgcaga tgatgcaggt gcagcaggcg gcggcggttg tgctgtgctt 180  
 ggttggtgtg gcggcgctcta cgcgggtcgc gctgggcaac tgccgcgacg actgcatggc 240



tgcattgcaac ggctggacca tcgtctgccca gctctcctgt gccagcgcac gctacggaga 300  
 agtcggggatc acaaccttag gtacgtcggc tgtattagcg aaagcagaag cgcttgcac 360  
 agcaccacaa gcagcacaag agcgaggcgc cgccgc 396

<210> 1266  
 <211> 450  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-024-Q1-E1-H2  
 <400> 1266

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 gccggtgggc acggtgggga ggcgcacgct ggcggtggag tcggactact tcacggcgta 120  
 cggcgtggtg ttccggaacg acgcgcgcgt ggccaagccc ggcgccaatg gcggccaggc 180  
 ggtggcggtg cggctgttcg ggaccaagac gcagatctac aactgcacca tcgacggcgg 240  
 acaggacacg ctgtacgacc acaagggcct gcactacttc aagggtgcc tcatccgggg 300  
 cagcgtcgac ttcatcttcg gcttcggccg cagcttctac gaggactgcc gcatcgagtc 360  
 ggtggtcaag gaggtggcgg tgctgacggc gcagcagcgt tccaagtga tcgagggcgc 420  
 catcgacacc ggcttctcgt tcaagaactg 450

<210> 1267  
 <211> 262  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-024-Q1-E1-H3  
 <400> 1267

gccgtcatcg taccactctc tctcgcttct tcttcttcaa tcgtccctcc ccgcgcggga 60  
 attggaggaa ggagagggga caagctttcc ggcgccgacg ccgacgcgga cccggcgccg 120  
 acacgatacg gtgcatcacg tgcacacac cgtaacggag gcccttgga catcactttg 180  
 tgctgcaact tcgatataac tcagttgcag catggcctca gtgggcgtgg caagcacatc 240  
 cttgggattt cagagtggca ca 262

<210> 1268  
<211> 409  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H4

<400> 1268

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acatgactcg cggcaaccag cgtgaccgcg accgtgagcg cgcggcgggcg cggaagccca 120  
acgccaaagaa ctcccaggac ggggtcaccc cggagcagcg ccgcgagagg gacaagaaag 180  
ctctggagga gaaggcggcc aagaaggcgc agcaggcagc ggccggcggc accggtacct 240  
ccacggacaa caacaagaac aaggcaggtg gcaagaagta ggaggcagtg gcgcgccgcc 300  
acctctgtac gattaatcga tgccttgagc ttgtaacttg ttgcatacct tgtaggtgcg 360  
atgcttggtg ggtcataaac tctgatgata tcgagatttg gtgatgaga 409

<210> 1269  
<211> 414  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H5

<400> 1269

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ttggaaggag gggatgagga aaaggaaccg gtacgggctg gtggagtacc gggcgctgcc 120  
ggcttacctg cgggacaacg agtacatcca ccgccactac cgctgcgagt ggccgctccc 180  
gcaagttctg ctctccgcct tctccatcca caacgagacc ctcaacgtct ggactattac 240  
agaggaggca aatatagata ctccagtaaa ggaaatgagg atgctgaaga gaaaaagcta 300  
gcttgggagg aacgggagat cgattcttgc ctgactctga ttgcaatgcg tcgaattggc 360  
aaaatattta cgcgtttatt tctgcttgt gcttaattcc tgcgtgtgtt tctg 414

<210> 1270  
<211> 439  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H6

<400> 1270

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ttgtcctgcc cgtcaattcc aaggactgct gggccgacac ccgcgtcatc tgcaccaaga 120  
cgcacaactg ccgggacgac acttgcgcg ggcgcggcat gccggacggc cgctgccact 180  
gggagttccc caacctggtg cccttctgcc agtgcttgcy cccaactgc cactagtccg 240  
ggcgccctcg attggcacac ttcgccggcg atgatggatg gtgcccact gcgactgccc 300  
agtctgctcc attcgttgtt gtttaaggca taatatataa actgccaaat tcacatgtat 360  
tttgggatat ttgttatcat actatgaaat gactgtgaat cgttggtctg atttgggtctt 420  
caccacatgt tttccttgc 439

<210> 1271

<211> 199

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H9

<400> 1271

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aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaataag gaaagacaag ggaggtggtc 120  
ctggaggatt gttagcttgc atgcccgctc atgggatgct aaatcacttc catggtgtca 180  
cctaatttga cttccttgg 199

<210> 1272

<211> 263

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-A1

<400> 1272

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gaaagcccca gctgaagcca ccatctccac acccaaggtt gcacctgaga ccactaccat 120  
ccacattgag gttgcgga aacatgcagt agttgacaac gtggacgacg acaaggacga 180  
ggcactaaca gtggcggcga aacaagagcc agcagccacc attgagcctc agcagattgc 240

tagtgacgtg accacttcgg aag

263

<210> 1273

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-G4

<400> 1273

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acgcagtaca gcgagtacaa gaactgggtg tggaagtcgc aggacgacct gttcctcaac 120  
ggcgccttct tcaaccagtc cggcggccag aacgagcgca agtacgacag gctcgacctc 180  
atccaggcca agggcggcca gtacgccgag tcgctcacca ggtacgccgg cgcgctcaac 240  
tgccgcgtcg gcaggaagtg ctagtgcgtg tgcagctcta ggctgcagct ttcattcattg 300  
gcgatcgatc gtaacaatgc aaggttgtgt tgtatataac tcttggtgtt ggaatgccgc 360  
ccgtaattaa tggtaactc taacactgct tgccttt 397

<210> 1274

<211> 385

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-F10

<400> 1274

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tccctcacca aataaggtcc cgcccttttc cgacattcac aggggggaca ggaaatcagc 120  
ggccatggcc tcgattccgg cgacgacctt cgcgcgtcatc ttatccgtcc tcttctgtgc 180  
cgcggctggc accgccgtcg acaacgacct ccccgactac gtcattccagg gccgcgtcta 240  
ttgcgacacc tgccgcgccg ggttcgtgac caatgtcacc gagtacatcg cgggcgccaa 300  
ggtgaggctg gagtgaagc acttcggcac cggcaagctc gagcgtcca tcgacgggggt 360  
gaccgacggg aacggcacgt acacg 385

<210> 1275

<211> 419

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-024-Q1-E1-F11  
  
 <400> 1275  
  
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 tccgccgcgg cgacgtcctc agtcccgagg tcacgtcttg cggcggctcc cccaagaacg 120  
 ccttcacgct cggcgagtcc aacacgttcc cgcccgccct caaggactgc gcgcgcatca 180  
 accccttgaa gcccgacgct cgggtgggcgc tggaccagat gcccgaggcc cgcaccatgg 240  
 gcgacctgct gatcctgccc accggcgacc tgctcattct gaacggcgcg gccaaagggt 300  
 gtcgccgttg gggcttcggg cggcagcccg tgctgagccc gtcctgtac tctccgcgcc 360  
 atgcgcgggg ctgcgggttc cgggcgctgg cgcccaacac catcccgcg atgtaccac 419

<210> 1276  
 <211> 447  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-024-Q1-E1-F2  
  
 <400> 1276  
  
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 tctcagggag ctgtcctatt cttgtttctc ctgcgcgcag cagaggtggg aaccatcgat 180  
 gccaaaatgg gagtagccat gcccatgcat gccttgataa tggagaaagc gaaacagcag 240  
 gagacggaga agaaggagga gaaaagcacg gagaaggaag agagtcaatg cttatcgccg 300  
 agtctccagt tcgagggttc ctgcttcaac agcgacagat gcgccgatgt gtgcatgaag 360  
 gagagctttc ccggtggcga gtgcaagcag gtcgtggcca cgcgcaagtg cttctgcaag 420  
 aagccttgct agttcatcgg tcttgct 447

<210> 1277  
 <211> 81  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-024-Q1-E1-F4

<400> 1277

tctacagtgt gtctgattca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 60

aaaaaaggag gacaaacagg a 81

<210> 1278

<211> 447

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-024-Q1-E1-F5

<400> 1278

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cggcacggtt caaccaatgg cgggtggcccc tcctacggcg gcggccctgg agcagctaag 120

cagcagcaag atgtttcgac ggcttcaatc tccgcttccg ccaccagagc gccacccttg 180

gctgcgccat gactttctcc atctacctgc ccccgctccc ggcgctccaac cttcccgtgc 240

tgtactggct ctcggtctc acctgcaccg acgagaattt catcataaag tccggcgccc 300

agcgcgccgc cgctgcccac ggcatcgccc tcgtggcacc tgacacctcc ccacgtgggt 360

taaatattga aggagagtca gacagctatg attttggtgt gggtgccggg ttttatttga 420

atgccacana tgaaaagtgg aaaaact 447

<210> 1279

<211> 395

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-F6

<400> 1279

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ccgcaccgga accgtctgga acgtcacaaa gcgcgccatc ggcgctcgaga tcaacaagca 120

ggttaacggc cgcatcatca ggaagcggat cgatgtccgc gtggagcatg tgcagccctc 180

ccgttgcacg gaggagttcc gcttgaggaa agccaagaat gaccagctca acgcggatgc 240

caaggccccg ggtgaggtga tcagcaccaa gacgcagcct gtgcgaacca cacctggctt 300

catggttgag ggtgctacac ccgagacagt cactcctatt ctttatgatg tgggtcaacga 360  
tctcaagggc gggtactaga tagaattttt gtacc 395

<210> 1280  
<211> 424  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-F7

<400> 1280

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gaagaaacaa aatgatttgt ggggtggggg tttggtgcat ggccgtcgct gttaaaattc 180  
gacacacgac agttgcgtaa atagacctag cgtaatcagc tgcacaaaacg aatgagagag 240  
cgagcgaagg aagcaaaatc tgggtgagga gatgaataga tgatgacggg agcgcggcgc 300  
ggcctggcag actgggccta agcacctgct ccgatccatc tgctctgctg ggcctaagca 360  
ccgccgcgga gtttggccat gttcctcttc ttcctctcct ccagggccgc cgccccctcc 420  
tgct 424

<210> 1281  
<211> 346  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-024-Q1-E1-G11

<400> 1281

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acgcccgcac ctgccgtgg gcagcaccgc actcaccacc gccgtcgcag tgaggtcacg 180  
agtcagctga agagcaagtt ggtacctgga atctcaagtc ncaggtcaag aacaggtacc 240  
gcaggatgag gcgcatggag gatgctgtgg cgagttcgtg agaggtctag gccatcgtct 300  
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<210> 1282  
 <211> 398  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-024-Q1-E1-G12  
  
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 atcggcatcg gcgggcggacc tggacaaggt cacggccgag accttcttgg acatcgagat 240  
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 agcagagaac ttccgagcac tttgcacagg ggagaaagga attgccaaagt ccggcaagcc 360  
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<210> 1283  
 <211> 446  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-024-Q1-E1-G2  
  
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 caccatcggc gccgagcgct tccgctgccc cgaggctctc ttccagccat ccttcatcgg 180  
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 tattaggaag gacctgtacg gcaacatcgt cctctccggt ggcaccacca tgttccctgg 300  
 gatcgtgac aggatgagca aggagatcac tgccttggct ccagcagca tgaagatcaa 360  
 ggtggtcgct cctccagaga ggaagtacag tgtctggatc ggaggattca tcctggcatc 420  
 nctcagcnac ttccagcaga tgtgga 446

<210> 1284  
 <211> 459  
 <212> DNA



<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-G3

<400> 1284

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cagcatgaga atgaaatcga ccgaaatctt cttgagctca gagctcgagc caccgatatg 180  
gttgctcctt acttccataa ggctgcttcg gtagggcaaa atactttctt tgacgtttta 240  
aaatatgttg ctgcccagtc cccttctcgg aaatcaaggc tgcaccctca tcaggaacca 300  
cagcagcagc aaccacaagt gcaggtggag ctgcagcagc aaccacaagt gcaggtggag 360  
ctgcagcagc cgcaaccaca aaaacaagca gcacctgtta tgcgagagg agcatctatt 420  
gctgctcggc aagcagcaat ggcacagcaa tctctggag 459

<210> 1285

<211> 447

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-D7

<400> 1285

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gcttggtaac aagatcgatg ttgatggtgg taacagccgg actgtttctg agaagaaggc 180  
taaagcatgg tgtgcttcaa agggaaacat cccctacttt gagacgtcgg ctaaagaggg 240  
cttcaatgta gaggctgcat ttgagtgtat agcgaggaat gctgtaaaaa atgagccaga 300  
agaagatatg tatcttcttg atacgattga tggtgggggc gctggaaggc aacaacgttc 360  
gtcaggttgt gaatgctaga agatatggag cactgcgatt tgctcggttg gttggtctga 420  
ttctctaggg cttgttttgg ttggcct 447

<210> 1286

<211> 404

<212> DNA

<213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-024-Q1-E1-D8

<400> 1286

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 tgagaacatg ttgggtggca agaaagttac agttgtatgt gttctaggtg gtcctggaag 180  
 tggaaaaggc acacagtgtg ccaacatcgt ggagcacttt ggattcacc c atcttagtgc 240  
 tggagatcnt ctgcgtgcag agattaaatc tggctctgag aacggaacca tgattgagaa 300  
 catgataaag gagggaaaga ttgttccatc ggaagtgact ataaagcttt tgcangaggc 360  
 aatgataaaa agtgaaaatg acaaattcct gatcgatgga ttcc 404

<210> 1287  
 <211> 425  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-D9

<400> 1287

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 acgcaccggt gcatatatgg ggctcctgaa ccagctgtgg gacgacacgg tggccggggc 180  
 gcgcccggac tccggcctcg gcaagctccg caactgcagc gacgacgccc aggggagagg 240  
 gctggacgaa gaagctgcgc gggaaagcca ggatggggcg cggcggcggt gacgacgccc 300  
 ccggcacgcc gagggagcccc accgtgtacg actgggtggg gatcagttcg ctggacctct 360  
 gaagcccaag ccaagacgag aactgcacaa ggaacccac caccaccatc aacacagcta 420  
 gcgaa 425

<210> 1288  
 <211> 402  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-E1

<400> 1288

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 ttccggcgac gaccttcgcc gtcatttat cgtcctctt ctgtgccgcg gctggcaccg 180  
 ccgtcgacaa cgacctcccc gactacgtca tccaggggccg cgtctattgc gacacctgcc 240  
 gcgccggggtt cgtgaccaat gtcaccgagt acatcgccgg cgccaagggtg aggctggagt 300  
 gcaagcactt cggcaccggc aagctcgagc gctccatcga cggggtgacc gacgggaacg 360  
 gcacgtacac gatcgagctc aaggacagcc acgaggagga ca 402

<210> 1289  
 <211> 431  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-024-Q1-E1-E11  
 <400> 1289

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 aggaacatgg taattggatc gagattctac gcgtggataa cctgggtcatc accggcaagg 120  
 gaaaccttga cgggcagggc ccagccgtgt ggagcaagaa ctcttcgacc aagaagtatg 180  
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 gggtcacgct gctcaactcc aagttcttcc acatgaacat gtaccagtgc aagaacatgc 300  
 tgatcaagga cgtgaccgtg acggcgcccc gggacagccc caacacggat ggcattcaca 360  
 tgggcgactc atccgggatc accatcacca acaccgtcat tggcgtcngc caccactgca 420  
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 <213> Zea mays  
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cgcagcccat ggacgacaac gagagagaga aagagaatga gaatgagaag gagaagcact 120  
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 ttggcccccga ggtccccctc aaggagcagc tcgagctcga caaggatgat gagagcctga 240  
 ggaggtggaa ggagcaactc cttgggcagg tcgacacaga gcagctggga gaaactgcgg 300  
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 ttccgattcc gttccaggct gacgagaagg gcta 394

<210> 1291  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-E3

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 agcactggcg ctgcctgctg tgctgctcgt gaggtccgcc gacgtgctg ccgagggctc 180  
 ccctactcca ggcggtcca cctaagggtg c 211

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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-E4

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 acgacgtctt gaacgggccc ctctgaccg agaagatcta ggcgaagaac acgctgatcg 180  
 tgaggccgga cgaggagttc aagaccgtac agtccgccat cgactcggtg cccgccgggt 240  
 acgcgcagtg ggtcatcacc tacgtcagct ctgggctgca caggggcaaa gttgtgatac 300  
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<210> 1293

<211> 408  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
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 gattctcatg acgacgtccc cgcgcggtgtg gctgctcgcc atggcactgg cgctcgcttg 180  
 cgtgctgctc gtgagggtccg ccgacgctgc tgccgaggcg tcnccgactc caggcgggctc 240  
 cacctacggg tgcaaccggy ccacggacaa gtcgtgcaag cccgagggcg tgggggtggt 300  
 gctgccgggc ggcgccatcg acctcgacgg cgacggtgac gaggacgagc tgccgcagtt 360  
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 <213> Zea mays  
  
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 tatcataata gagagtacga cgacaaaagc catgggcagt aatggcagac atcataggcg 180  
 cggagtccca cgcccgccac ctttaccact ttacagggat tgggaggagg aagaggtcgc 240  
 caacaataag aggctgtcga agcagctgtc catgaacgag accaccatgg aggtcaagtg 300  
 ggagaagcgg aagcggcaga tacaacggca gaggagcagc atgcgcctga gcgaagccga 360  
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<210> 1295  
 <211> 431  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-E7

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ccctcgacta cgaggccacc ggggagtcgc tcgtgtacag ccagctgtac ccgttcgagg 180  
gcctccagaa ctacacctcc ggcatcatcc accacgtcgg cctcgagggc ctgaagcctg 240  
ggaccaggta cttgtaccgg tgcggtgaca ctgccatctc ggacacaatg agcggcgtgc 300  
acgcgttccg cagcatgccg gctgtcgggc ctgggagcta gcccgggccg attaccttgg 360  
tcggggacct cgggaccacc tactctacca cctcgactgt gggacacatg gtgtgcaaat 420  
gcaccgatct g 431

<210> 1296

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-E8

<400> 1296

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tcttatccgt cctcttctgt gccgcggctg gcaccgccgt cgacaacgac ctccccgact 180  
acgtcatcca gggccgcgtc tattgcgaca cctgccgcgc cgggttcgtg accaatgtca 240  
ccgagtacat cgcgggcgcc aaggtgagggc tggagtgcaa gcacttcggc accggcaagc 300  
tcgagcgctc catcgacggg gtgaccgacg ggaacggcac gtacacgac gagctcaagg 360  
acagccacga ggaggacatc tgcgaggtgg tcctgggtgga gagccccgcgc aaggactgcg 420  
acca 424

<210> 1297

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-D5

<400> 1297

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gctggcgctg gtgctggcgt ggcgcgtgct ccagccgcgg ccgtccgacg ccgcccgcga 180  
gcccgcctcg cagtcgcggg cgacggcggt gtcgtcgggc gccgccaagc ccaagtgcgt 240  
ggccggcgcc aggaacgacc acgcgtgccg cgtcggcgcc gtgcacgacc cggacagcca 300  
ggaggaggag ggctccagcg tcaccatcga cgcgcccgcc gccgcgcccg acgacgtcgg 360  
ccacgacgac ggcagcgact acaacgaccc cgacgtgccc aacaacgaac agctcg 416

<210> 1298

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-C3

<400> 1298

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ctccctggca tggaggaagt agctgtttcg cctatgatcg ttgccgccgt agtgctggac 120  
aacaatggcg ccgacgcggg ctcttgact gccatcccta gcgtaacaat aagcctagag 180  
gagaaagaaa atatcaatgg ggatgttccc acgatcacct cggccgcaag caacgaggag 240  
gaggcgttgt tcagtgtcgg agaatccacc aaggacgatg gccatcgctt gacgatggaa 300  
tgcaccactc ccgtctctc cagtagccct tccactcgca agaagcgcg ggcgttcagc 360  
ctcttcaggg cgatgttctt gtccttcggc cggagcgacg acagcatgaa gaagacagac 420  
gacgacacca cgagcccc 438

<210> 1299

<211> 443

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-024-Q1-E1-C4

<400> 1299

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 tgtcatatcg tttaagccca caatggtaac aatactttcc cccgaggttg cagaaaaaga 180  
 atcagaagct ggtgggaaga tgggtgacct agattcttat gagattgaag gcggcgagac 240  
 anaatcagag attttgcaga atctagctga gttccagttt tcttgtgtcc tgtacaatgg 300  
 tgcnctagag aatgcatgca gtgagcttgg agcccgatg tctgccatgg acagctctag 360  
 cagaaatgct ggcgatatgc ttgatcgtct cactctcact tacaacagga cagccaagc 420  
 atccaatcac acagagctta ctg 443

<210> 1300  
 <211> 301  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-024-Q1-E1-C5  
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 gagctgctga tgcagttcga cgagaaggag agcataagca cctcctccat tgaggagcac 180  
 ctgcaagaac ggctccctga cgctgtcgat ctgaaagccg tggatctcga cagcagcatg 240  
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 a 301

<210> 1301  
 <211> 457  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
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 tccgcggcct gcaggtccgc cgcgccggcg ccgacgactg ggtcaccgtg cagcccgtcc 120



gcgacgcctt catcgtcaac gtcggcgacc aagtcagat actgagcaac tccgtgtaca 180  
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tctacaaccc caagggcgac gtcccatcg ccccggcgc ggagctggtg gcggctgcga 300  
gcctgccggc gctctaccg acgatgacct tcgacgagta caggctctac gtcaggaaca 360  
agggcgccag gggcaaggcg cagatcgagg ctctcaangg gcaggggaac acagaaagtc 420  
aattatagac gacgactagc tagctactag ctagtac 457

<210> 1302

<211> 412

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-024-Q1-E1-D1

<400> 1302

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atcatggacg tcgagttcag aagggtgcga tgcaagtacc ccgccgggca gaagatcgty 180  
ttccacatcg agaagggctg caacccaac tacctggcgc tgctggtgaa gtatgtggcg 240  
gacgacggcg acatcgtgct gatggaaatc caggacaagt tgtcggctga gtggaagccc 300  
atgaagctct cttggggcgc catctggagg atggacactg ccaaggcgct caagggcccc 360  
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<210> 1303

<211> 210

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-D10

<400> 1303

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ataacacctc gagtaggagt tgaagtacat gatcattgat ggtatatata tagaggaagc 120  
atgtctatct aataagtccc tcatcaaaa ttgttcttta tgatcatgat atgtacgtgc 180  
atatatatat ataaaaatac gtctcctttt 210

<210> 1304  
 <211> 395  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-D11

<400> 1304

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 cacttcacatg acctcctcac ggccgacggc gccatctacc ataagacatg cttcaagtgc 180  
 agccactgca aaggggtcct ctcgatgtgc agctactcct ccatggacgg tgtgctgtac 240  
 tgcaagaccc acttcgagca gctcttcaag gagaccggga gcttctccaa gaacttcacg 300  
 ccagggtggca agtcacacga caagggtgaa ctgacaaggg cccaagcaa gctgtcgtct 360  
 gcattttctg ggtaccagga taagtgcgca gcatg 395

<210> 1305  
 <211> 396  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-D12

<400> 1305

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 agagcgcttc atggtgaaaa aacaggacgg gctggtgaag ctgcaggggt ccaagcaagg 180  
 gaggaagggg cagctcgcga tcgacgccga gatcttcgag gtgacaccgg cctttcacgt 240  
 cgtcgaggtg aagaagtcgg caggcgacac gctggagtat gagatgttct gcagcaaggg 300  
 cctaagacct tcaactcagc acatctgctg gagcagccga tctgaggaga acatgggtcc 360  
 ttcagtggtt cagccatcat aattgaagcc atcctc 396

<210> 1306  
 <211> 294  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-A1

<400> 1306

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tgtgacgtga tggagctctt gtcctggaag caacccaagt gcccacaatt gtacatatac 180  
agctccgccg acaggggtgat cccagcgaaa tcagtggagg cattcatcga cggccagcgg 240  
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<210> 1307

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-A11

<400> 1307

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cgatgtggag cttcttagaa aagagatgaa tgagactgat gtccccgtat cttactcagg 180  
cactggcatc cctgagaagt caatacgcaa agcagctctt gaggttattc tccgcaggct 240  
cctctctttt ctcaagccag acacctttca ggggtgccatc aaggcaatca acgaaagaat 300  
tctctctgtc cttgatgctc ctggttctgg tcgtgttgat ctgggtatgt tcttcgcat 360  
cattgctcca atctgttcag gccctgtgga taggcgcaag cgtatcgtct ttgatgcact 420  
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<210> 1308

<211> 417

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-024-Q1-E1-A12

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 gatgttgctc tggacatgag agcaccacct tttcagcatc tatcggcagg gcagagaagt 240  
 gactcttggtg ataggctgac agcagagaca aacttgtaga cgagatcaac caacggcatc 300  
 gctgccactg cagcaggagt ggcagcaact actcacagaa aggtcggcgt tgttccgttt 360  
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<210> 1309

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-A2

<400> 1309

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 aggcaccggc agagtcaccg aaggcaggca gtcttgccaa ggcaccggcc gagtcaccga 180  
 acgcaggcag tcttgcagct cctgccaaagg caccgagtc tgctgccacg agaactgccc 240  
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 cgtctaggaa gtctgggtcca gctgccgcgc cgaccaccgc cgctcttaca ccgtcgtctt 360  
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<210> 1310

<211> 443

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-A4

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 agaactgctc tgctcttcag agtccaagg aggtgcacc tgacgcatgt ggggttgaag 180

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<210> 1311  
 <211> 275  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-A8

<400> 1311

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 gaggtcaggt tcgggaatgg ccgtctgtga tgaatgcatg ctcaagttcc aggatctctc 180  
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<210> 1312  
 <211> 251  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-B1

<400> 1312

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 cagatcaatc tgtgggagta gccaaaccaac ttcaacatcg tgcattgatt agtcagggttc 180  
 gtgacccaaa gctacatgac gacctagaaa ctcttggcgg ctgtgactag ctttttgcgt 240  
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<210> 1313  
 <211> 378  
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-024-Q1-E1-B3

<400> 1313

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gggcctgggtg ggtccttcga catcaccaag ttggggcgct cgggcaatgg caagacagac 180

agcacgaagg ctgtgcanga ggcattgggca tcggcggtgcg gcggcactgg gaagcagaca 240

atcctcatatc cccaagggcg acttccttgt cngacaactc aacttcacan gcccttgcaa 300

agggcgacgt tgacatccag gtggatggca atctgctggc gaccaccgac ctaagccaag 360

tacaaggaac atggtaat 378

<210> 1314

<211> 85

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-B5

<400> 1314

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tactctttgg ttctttgaaa gaatt 85

<210> 1315

<211> 199

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-B7

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ggcggagagc ggcgaggcgg cggaggcgaa gaagatccag gacgacttct gctcgacgct 120

gtgcgagggc aagaagggga cggacctggt cgtgtgcaag gagtcctgcg cgctctccca 180

gcagttcaac ctggtgctg 199

<210> 1316  
 <211> 294  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-024-Q1-E1-C1  
  
 <400> 1316  
  
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 cgttcgccaa gttcctgagc ccggtgatca agagcgtgtg cgccaagacg gagtacccgg 240  
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<210> 1317  
 <211> 399  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-024-Q1-E1-C10  
  
 <400> 1317  
  
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 taagaagaag tttaacttgt ttgcgattca aacacatcca atctcattca attcacatgg 180  
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 gtaccgggca cagaccgctt cctatttgtt cgtgggggatg taactgtaag ctttgtgacc 300  
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<210> 1318  
 <211> 271  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-023-Q1-E1-G5  
  
 <400> 1318

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acctacattc gtctgtgcta atcgtgctga gaacagacga gagttttaca cagacttaaa 120  
agatcaacgc acagcttttg cacatgagaa tatccagaca cagccagca agagggaaga 180  
ggaaaaagaa tctctatgac aactgaggaa taacttggac gtccgagcat aacgcatgtg 240  
atacttcgag cactacggac acccaccaaa c 271

<210> 1319

<211> 399

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-023-Q1-E1-H10

<400> 1319

cgcattccggt tgcggggcag gtcggccgag gagcagaaga ggcacgccgc cgcgttcctc 60  
accgacctgc tgtccaacta ctgggccgcc atcacggatc tgcactccat cggcgcgagg 120  
aagttcgcca tcatcaacgt ggggctggtg ggggtgctgc cgggtggtgag ggtgctggac 180  
gaggacggcg ggtgcgccga ggggctcaac aagctggctg aagccttcga cgtcgcgctg 240  
ggggcgctcc tcgccggcct cggcgacaag ctgccggggc tgacctactc gctggccaac 300  
tccttcgcc tgacgcagga cgccttcgag gaccgaagg cgtcagggtg cagcgacgtg 360  
gccagcgctt gctgcgggag cngggggctg ctgggcgga 399

<210> 1320

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-H3

<400> 1320

cggggccgac caaccgctcg ggttagatgc cgcagcccggt cggcggcagc tgccactcct 60  
gacatgtttg acgctctcga gagcgcccca ggacctctc tagaagtgcc tccctcgcca 120  
tcgtcagcca agaagcgttt gtcccaggcg ttcgagggtc acccgagtgc ctcagcgccg 180  
atcaagggtg cgttgagag ggtaaagcgg cactcgcagc taatttccag tcacaggatg 240  
tcgctgtcct gagtcaaagc aggagatggg acgcaaagtg ttgtgattat acgatacgtc 300



gggtgacact tgtgttttcc ttttgcggtgt gtacgtatta cttgttacgt gtgacatggt 360  
 gggatttttt gtgcctacat atggtgggg 389

<210> 1321  
 <211> 446  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-023-Q1-E1-H4  
 <400> 1321

ggccacccaa gccttcgga ggcaaaccat tcacaccgg ccattccgag cagagaaggg 60  
 gaggtacctg ctacgactag ctagattcca cgcccgatgg cgcccaccag gatccgcgtg 120  
 gccttgctga gcttggcgct ggtggggctg ctcatctgcc acctcgccac caccgcctcc 180  
 gccggcaaga acagaatccg catcctcgac agcgtcgacg actcggccgg ggacaacaac 240  
 agtccgacg cctcggccgg ggacaacagc accgactccg agtcggaagg ccgcgtcgtc 300  
 tattccgaca tgaagctggc tgatgagacg ggatctgctc cggctccggc accggcgccg 360  
 gggccgacga ccagttgaag cgaggaaggt ggccaaaaac tgaggggccc ggctactatc 420  
 ttttgctata actaaagata gggcca 446

<210> 1322  
 <211> 302  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-023-Q1-E1-G3  
 <400> 1322

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 tttgactgct ggaatgctag gtcgccgtcc cggagaggcc ctcatgttta actttgcatt 120  
 cctgctgcac caccttcctg atgaaagtgt ctcaattatg aaccaaaggg atcggcttct 180  
 ccgtatggtg aagggtctcc gaccaaact agtgacgttg gtggagcagg acgcaaatac 240  
 taacactacc ccattccctt ccaggttccg ggaggtctat gactactatt cggcactttt 300  
 tg 302

<210> 1323  
 <211> 392  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-023-Q1-E1-E9  
  
 <400> 1323  
  
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 gcagatggat cggagcaggt gcctacgccc agtctgccag gccgcgccgc gctcccgta 120  
 tcatctattc atctcctcac ccagatcttg cttccctcgc tcgctctctc attcgcttgt 180  
 gcagctgatt acgctaggtc tatttacgca actgtcgtgt gtcgaatttt aacagcgacg 240  
 gccatgcacc atacccccac cccacacatc attttgcttc ttcctttctt ttgattcgac 300  
 gagcctgtg attcatgcat gctctcgatc gaggcagagc tgttgatgtg tgttatgggtg 360  
 tactattcta tttttttatt tagaaagttt tg 392

<210> 1324  
 <211> 393  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-023-Q1-E1-F3  
  
 <400> 1324  
  
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 cccttccctt cttcttcttc ttcttcttct ctcaaaaacc caatccatca gcgctgccct 120  
 ccgcattgct cttgatccca tccagtacat cgattctccc cccaagatca aaggccggag 180  
 gaggaagaaa ggtagggag tcggccatgg gatgcttttc atgctgctgt gtggcagatg 240  
 acgacaacgt tggcaggagg aagaagcatg acgatcccta tgttcctatc cctgctcatg 300  
 ttataattt tggacctagc cggttccag cccaacccc tgtcatctcc actggcagag 360  
 ctgagccaat tgcagtaccg gccattcatc tgg 393

<210> 1325  
 <211> 420  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations

<223> Clone ID: LIB148-023-Q1-E1-F4

<400> 1325

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ttactggcac gccaaagctta tgacctgata gagagccata taaaacgcct tgatgaagac 120  
ttggggccagt ttgcagaaga tttaaagcat gaagggaaga tacctccaga tgaacctaca 180  
gtccttcctc cagttccggt ggtagcagg gatgagaaaa ggaggtttgg ttttagtaca 240  
cctcaagcat caaaaaaatt tagagagagg gaatgggaca gggaaagggg tatggacttt 300  
gatttaatgc cccctccagg tagcagcaag aaagcaggta catctatgga tgtggatcan 360  
acaattgatt caaatgaacc gacatactgt atatgccacc agatttcaaa tggtgacatg 420

<210> 1326

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-G10

<400> 1326

tctcgcgggt cgatgcaagt ctctagaatg aggcgtatta agagagagag acgcaggccc 60  
gccggcgacg atcgaggagg gaggaacgcc agagaccggg cggcggcgac gatggctccg 120  
cgcagctcat cggcggcgac gtgcctgtgc ctgcgtctcg ccgcggccac gctggcgctg 180  
gccacggggg cgcaaggagg aggaccatcg gcatcggcgg cggacctgga caaggtcacg 240  
gccgagacct tctctgacat cgagatcgac ggcaagcctg caggccggat cgtgctggga 300  
ctgtttgggg acaccgttcc taaaacagca gagaacttcc gagcactttg cacaggggag 360  
aaaggaatgg ccatgtccgg caagcctcta tggtagcagg ggggt 404

<210> 1327

<211> 385

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-D3

<400> 1327

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aacaaccgca aacgggaaga aaggggtccc aattggccaa ggctgttacc ggctcattgg 120  
 tggtaatcat caccaggggc ccccgcatg tcatcaacgt cggatgacta ggacgctaca 180  
 gagaccacaa ggagctgaac gacatcacgg tacgagcact gcgtgctcaa aaatactaac 240  
 aacggcgtgc gcaacaagtc gtacgtgaat cccgactccg ttctgactga ttcgcatcgc 300  
 accttcgaca tcatcatgat ggaggacgta gccaaacca tcgtcatcca tcagtacttc 360  
 tgcccgcata acgtatgccc tggca 385

<210> 1328

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-D4

<400> 1328

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 ctgcataagg aattgcgtcc aaatggcatg gggcccggca acaatacgcc gtcagccgca 120  
 gtcaaccaga tggttgccga cgccagacac tacatcgaca aagactacaa tgagcatatg 180  
 aagcatctgc atgacacgaa acacagactg tgtagtctag aaaacaaact aacggacgtc 240  
 tgatgtgtcc gaccaggagg tcaacagcat cctgaagcag ttcgataaga aggatatgga 300  
 gtacatgcag ttgcagaggc acattgttaa cgtcaaagat ttcgagctgc taacaatgat 360  
 atggaacgga gcttttggcg acgtcag 387

<210> 1329

<211> 367

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-E3

<400> 1329

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 ggggccaaga acaacttcaa gtacaagtgg gaaccaatg gacaaattcg gaactttctc 120  
 cacttcccgt caatcggatg caacgggcgg caggcgggta cggcgccatc agcgtgggtga 180  
 gccccctcct catcacggtc gccttcgacc agccgccgcc ggagagcgac cacgcgggtgc 240

tcatcggcga ctggtacacc aaggaccacg aggtgctggg gcgccagctc gacgccggca 300  
agagtctggg ccgccccgca ggcgtgctca tcaatcgcaa tggatgcaca gatcaggaag 360  
ccacaac 367

<210> 1330  
<211> 385  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-023-Q1-E1-E5  
<400> 1330

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acgccgacgg caacggcacc gtggagtctg acgagctctc ctctctcctg gcgccgtgctc 120  
tcctgggggcc ctgccgcccc gccgtggccg tcgaccacgc gcagctcgcc gaggccttcc 180  
gcgccttcga ccgcgacggc aacggcttca tctccgcgcg cgagctcgcg cgctccatgg 240  
cgctcatggg ccaccccatc tgetacgccg agctcacga catgatgaaa gaggccgaca 300  
ccgacggaga cggcgctatc agcttccagg agttcacage catcatgggc aagtccgccg 360  
tcgacttctt atgcctcgct gctct 385

<210> 1331  
<211> 380  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-023-Q1-E1-C11  
<400> 1331

cagctcgctg acctgcccct cccggccaac ctctccggcg cgggcgtccg ggcctcggcc 60  
ctcagcgtgc gcagcaacgc gctctgggcc ggcggcgtca acaccaccgg cttcaccgctc 120  
ccgccgcgcg tcgtgccggc cccgttcgcg cgcgcctcgc ccatcgctctt cgagctcttc 180  
gtgggaaact cgacggccgc gttcgccgcg ccgcgcggct acgcgctggc cacgcccgctg 240  
gccggcctcc tcgcgtacga cgcgtcggcg gggcccgcgc cgcgcgtctc gctccggggcg 300  
ctcggcgcgc cgggtgcgcgt cgagttcaag gacgacctgt cggcggcggc ggggtctggac 360  
aagggggctg agttcgacgc 380

<210> 1332  
 <211> 376  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-023-Q1-E1-C3

<400> 1332

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 ataattaagg ccccgggggc cattcaaaca aaccggcggc ggcaaccggc cggccgggca 120  
 tgacgataac acggacaatg tgccaaggcc tgctgcttcc actactggcg gcggcgctcg 180  
 cagcgacggc gcatttcacg gtcggcgatg tggatgagta cgtgtccaag cgcacgcagg 240  
 agtcccgccca caggaacaac ggtggcgcg gcatcgatga cctcatctcc agtgcggcgc 300  
 gcttccacgc caacgtggat gcacgcgcct atggccgctg atccgacctg cangangaag 360  
 caacagctac cgtaat 376

<210> 1333  
 <211> 366  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C4

<400> 1333

tcccgggtcc atccaagccc ccaaaattaa tccttgtaag gacggcaagg ggccggacac 60  
 gccgctggaa aaagcgggtc ccggccggct gaagcaattc agggccatga accaattcaa 120  
 gaaggctgca ctgcggttca tcgcggggtg cctgtcagaa gacgacatcc gtgggctcaa 180  
 ggagatgttc aagagcatgg actccgacag cagcggcacc atcaccgtgg actagctgcc 240  
 gacacggctg gccacaagg tcaccaagct gatcgatgcc gaactccagc agctcatcga 300  
 agctgcctac tccaacggga acgggacgat cgactacgag gagttcatca ctgccacgat 360  
 gcacat 366

<210> 1334  
 <211> 395  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B5

<400> 1334

ctcgcggggcc gacacacgcc tctaggtctgg gtcgtggtag ccggcgccac agcctctcct 60  
gctgtcgctg ctggctcgccg tgctagcggg gcccgccgat gtacgctaac gccggccaag 120  
ccaatcccct gaggtctggc gggcgctggg tacaccacag ctaaggtaag ttcaccgccc 180  
ggccgtggaa acacgcccac gcgaccttct accgtggggc ggacgggtcc ggcatcacgg 240  
ctggctcttg cggctacaag gatactcgca cgcaggggta tggcgtgcac actgtggccc 300  
tcagcacggg gctgtacggg gacggcacgg catgcagatg gtgctacgac gtatgctgcg 360  
tgaacagccc tagcgggtgc aagcccaccg gagca 395

<210> 1335

<211> 363

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A3

<400> 1335

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taacaaccct tccaaaaaag taccacttct ccgtgaggcc tgagcccctc gccgcggtga 120  
gccaagccgg cgcacgtcgc cccggggctc acgctcacca ccgagcccca accaattaat 180  
aatatatata tatagctagg atcgatcgtc agtaaaatgg caggctccgc cgtcctgagg 240  
agccccctgt ccgtctcctc ctacatcctc gccgcggtgc ccgccaccgc cgcggcgacg 300  
ccgaccgacg ccgccatcga cgagggtac gcgcacatcg tcaacctcac cgctaaccag 360  
gag 363

<210> 1336

<211> 465

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A4

<400> 1336

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tcaaggggct tgtcatggca tccaaactta tcctcaagga attaaaggac ttgcaaaagg 120  
 accctccaac atcatgcatt gcaggtcctg ctgggtgagga tatgttccac tggcaggcaa 180  
 ccatcatggg tcctcctgat agtccatatg ctggaggtgt tttcttgggtg aacattcatt 240  
 tcccgccaga ctaccccttc aagcctccaa aggtatcttt taagacgaag gtcttccatc 300  
 caaacatcaa tagtaatgga agcatatgtc ttgacattct taaggagcag tggagccctg 360  
 ctttgacaat ctctaagggt ttgctttcta tctgtccct gcttactgat tccaaccag 420  
 acgaccctct tgtccctgaa attgctcaaa tgtacaagac ggatc 465

<210> 1337  
 <211> 67  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B4

<400> 1337

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 gcccggc 67

<210> 1338  
 <211> 280  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H12

<400> 1338

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 ttaaacgttt gcgatcacgg ggactgctcc aaacgtgacg acaggatcca gggccacaca 120  
 ctttgcatgg agcttagcac ttgtgtcgat gatctcagcg atgatccgctc cgacacgcag 180  
 cacgatacct ccgatgtgtt ctaggagctg cctgaagtgg agctatgctc acagaatcgt 240  
 catcagcagt atacggcggt ccatggtcca gtctgacatc 280

<210> 1339  
 <211> 300  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB148-022-Q1-E1-H3

<400> 1339

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gagggcgctc ggcagggcgg cgacggggac gaccaggacg gcgccgctgc ggcggggcggc 120  
ggtcgcgctt tcgttccttc gggcggtgcc ttgtccgtca cgtccacggc ctctgccgcg 180  
gactttcttct ctctgttttc ctcttgctc tacattgtcc gtcgctcgt aatcattcct 240  
ctgttttctt cccgctcttc tatctgtttc ttaattctc ctctgcatc gcttttctcg 300

<210> 1340

<211> 295

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H6

<400> 1340

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caccatccgt cgtcgccaa gctaccaatg agccaacgac atcaccaccg cccagcggga 120  
atggggcaca acatgaggat tgctcgctg gccttggtg acctgctggt ggtggcgggc 180  
gcgccgcccg tcgccaccgc gtacggctgc tacgaccact gctacgatcc ctgctccaac 240  
gggagcagag accctgcct gcatcaagat gtgcaaccag gcatgcggt ctact 295

<210> 1341

<211> 124

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F12

<400> 1341

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tctgcacagc tctgtaccaa cattcacacg gcgagcgtcg gacgctgttc aaaggcaatt 120  
caga 124

<210> 1342

<211> 426

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-022-Q1-E1-B9  
  
 <400> 1342  
  
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 gccacatcag ccatgggcgc ctgcgcaacc aagcccaaga cgcttgaggg gcaggcccca 120  
 gctgaggccg ccgtctccac acccaagggt gcgcccgagg ccactccaat ctccgttgag 180  
 gttgcggctg atgaacaggt agctgagaag gtggtggtgg aggagccggc tgcggcgggc 240  
 gacgttgagc atcagaaggc taatgaggtg ctgcgtccag aggcggccgt cgccgagccc 300  
 gaccacaagg aggaggaagc cgtggagaag accgtcgtcg aggaggagaa gccagcggca 360  
 gcagcccatg cagaggaaaa ggtcgccacc gccgccgaga ccacgacgac ggtggaggcg 420  
 aagaag 426

<210> 1343  
 <211> 401  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-022-Q1-E1-A3  
  
 <400> 1343  
  
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 cgccatccgc tctccatgct tagggtcgc catcagcgct cgacacattc gcctggctgc 120  
 tcgacgcatt cgccagcgcc accttcaacc agatcgactc cgcctaccgt gaggccggag 180  
 gggatccttt cgtggctgcc agtatcctgt cctccacgca ggacacgcac ccgccgcagc 240  
 ccctgcgcgc accggatctc tcgccaagga caggctggtg caggaggcca ctccatagaac 300  
 ctgtcatccg ccgccatcaa cgccctcctc ctagatccca tcatccgctg cgaatctccg 360  
 ttcagctccc cctcgcgctt tcgtcgctgc cgtggaccgc t 401

<210> 1344  
 <211> 426  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-022-Q1-E1-B11

<400> 1344

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gcgatgagag ccttgttcct cctggctctc ttctgcatcg tgcattggtga gaaggaagag 120  
tcaaagggca tcgatgcgaa agcgtccggg cctggtgggt ccttcgacat caccaagttg 180  
ggcgctctcg gcaatggcaa gacagacagc acgaaggctg tgcaggaggc atgggcatcg 240  
gcgtgcgccc gcactgggaa gcagacaatc ctcatacca agggcgactt ccttgctcga 300  
caactcaact ttacaggccc ttgcaagggc gacgtgacca tccagggtga tggcaatctg 360  
ctggcgacca cggacctaag ccagtacaag gaccatggta attggatcga gattctacgc 420  
gtggat 426

<210> 1345

<211> 269

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-021-Q1-E1-H8

<400> 1345

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gtcatacgca ttctctcacc agtggaggag catgaacacc tcttctgcgc gagctgcgca 120  
gtggacatgc tcccatgtac atggaaacct ggcaggcccc aactgggggc tgttgctggg 180  
cgagagcgct gggatggcgg ctaccaggcc gtggggagaac cagaccatgc caccgccggc 240  
cactggccgc gcagcatcca aaagcgcta 269

<210> 1346

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-A1

<400> 1346

tcggggggccg acacaagcct ctacagtgggt tctgtctatg aattatatgg ttctcacat 60  
ttcttactag gcgactttgg gttctagtta tattccagga cctgccggag aggatcaagc 120  
tgctgcagga agagatcggg cagtagcagg aggaggcgcc gggcatgctc agcgttttcc 180

gggacctcaa ccccgacgag atggtggcca ggaacacccc aagtccgacg tgggtgcggaa 240  
ggagggcggc gacaccggg tggagatcta ctgtgccgcg tgcacttcaa cggatgatggc 300  
tcgtgggatg tgattaggga tggtaatgga attgtctctt cacaatttct ttgagccctt 360  
aattaatttt agttcaaaaa tgaatagaaa tagaacctg 399

<210> 1347  
<211> 422  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-022-Q1-E1-A11  
<400> 1347

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atgacggcca tgggctacgt gccgtacctg tgcgggctca actacacgga cgacaagggtg 120  
agcacgatca tctaccggga gccgccggtg tcgtgcgcca agctgtcaag gctcgaacag 180  
gacgacctca actaccgctc catcacgctc atcctcaacc agccgccctt caccgcgacg 240  
gccaaaccgt ccgtcacgaa cgtcggcgcg gccagctcga cgtacaccgt ggaggtgaac 300  
gtgccggcgt cggtgacagt ggaggtgaac ccgccgaagc tgactttcaa ggcgctggaa 360  
gaggtcctga actactctgt cacaatcaag tcggccaacg gccaggcgct taccggccct 420  
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<210> 1348  
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<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-021-Q1-E1-F4  
<400> 1348

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ccgcaaacgg caaattaacc aatggcccct tggcaaacaa acccaaaaac ccttaagggg 120  
aaggccaac ttaaggccgc gttttcaaaa ccaaagggtc cccccaaggc aatccaaacc 180  
ccctttaagg ttccggctaa taaacaggta cctaaaaagg tgttgttgga gaaccgggtt 240

gcggcgcccg acgttgagca tcagaaagct aatgaggtgg tcgctccaga agcgcccgctc 300  
gccgagcccg atcacaanga ngaggaagcc gtggagaaga ccgtcgtcga agangagaag 360  
ccagcggcag ccgccaatgc agaggaaaag gtcgccancg ccgccgagaa cacga 415

<210> 1349  
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<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-021-Q1-E1-E4  
<400> 1349

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tgtttgcgg cgtactcaag aacgagttca tgaacctcgg cttegactac ttcgctgacn 180  
cgacggtcga gatcgctacc tacacgttgg cagtgcctggc tgatgggctc gtcacggaca 240  
accctgccac tgcagcttcc tacttcagga gtccatgcag tgacatgaag ctgaacctga 300  
gctacacgat cctgcctgca caacctggcg ctctgggtcaa cctggcatcn ccgggggggcc 360  
ctggctccgg cgggagcccc ggcaccgttg ctccaaccgc ctgacgttgt ggac 414

<210> 1350  
<211> 325  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-021-Q1-E1-D11  
<400> 1350

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atcgaggtcc tgaccgtacg gacgacctcc acaagcggag gatccgccgc gtcgtggtg 120  
atatgcatca cgacactgtc cgccaacctg tgaaacataa cggaggcgaa gcacaccagc 180  
acgtacaagg tgggtggacgc ggtgacggtg ctaaagatgc aggtggacgt ctgcacgaag 240  
ctcttttagg ccgcgcaggg gatcgccatg gacgaggtca atgcggcctc cacgctcgac 300  
gagcagtcgg cgctgaagct ctgca 325

<210> 1351  
<211> 352  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-021-Q1-E1-A3

<400> 1351

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gacgctacag ctggttggaa gccgatggcg gacgcagcgg cggcgggtac tccaccccga 180
gcgatgcagc gccatccaca cctgccgctg gggagactac gaccccttcg tcatgcggcg 240
gttactccac ccctagcgag gcagcgccat ccacgcctgc cgctgaggag acgacgacga 300
ctccttcgtc aggcggcgga ggttacggcg gtgcaaccgg caaagcttcc tc 352
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<210> 1352  
<211> 434  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-020-Q1-E1-G12

<400> 1352

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ttcagagatg ggggtggtgg gcagtatttc atctttgggt tccacaatgc tcacgtgatc 120
aggcagaggc ttcttagggc caatcttacc agtcgggtcc caaggcagca tgatctttac 180
cttgatgccc agcacaccct gtctgagcag cacatggcgc acggcgggtg ccacatagta 240
gttaacaggg tccccactgt ggatcatgag gccatccaca aacttcatgg atttagccct 300
ctgtcctcga agtttcccag acaccacgac ctcgcagcct ttggccccac tctccatgat 360
gaaccgcagc acaccatagc aggcctccg cacagcaagg cctcctanga gtttgtaacg 420
cagagactct gcct 434
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<210> 1353  
<211> 355  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-G9

<400> 1353

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ccccaggggtg gggattgagg ggcccagaag ggctgcctgc cctgggtcag gcagggtcac 180  
cttgggaagg ctcggaagca caaatgagtg ctgggcttgc tgetgtgcca agggtcatat 240  
gtgactgccg ctgttgacct gcgctgcgtc acagtggagg ggtttggggc tgtgcttctc 300  
tgccctttca cgaaagtgga gccagaaacc ttgccaaggc catggctgct gtctt 355

<210> 1354

<211> 414

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-020-Q1-E1-H12

<400> 1354

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gagattggca tggctttatt tgtttttttt tttgtctttt ttgatttttt ttttttttgg 180  
cgcttgactc aggatttaaa aactggaacg gtgaagggtga cagcagtcgg ttggatcgag 240  
cattcccaaa gttctacagt gtggccgagg acttgattgt acatggtttt gttttttttt 300  
taatagtcac tccaaatata gcgaaatgca ttgttacagg aagtcctttg ctttcccaaa 360  
agccaccccg cttctctcta aggagaaggg gccagtcctc gcccgagtcc acac 414

<210> 1355

<211> 347

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-H4

<400> 1355

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ctgcgtacga tgggttcttgt aaagatgctg cagattcctg aaagacggta cttgaactgc 120  
 ccggagcatg ttgtattttc ttaagatgct ggaactaaga cggcttagtt gaattttcac 180  
 tatcaagtga gtctcgggtct tgccccaaaa agaatgtttt gtacctctctc tgtcccaatt 240  
 tatacgacaa tttataattc gtaaaaaaaaa aagtgaccga aacaaaaagc aaaaatcaaa 300  
 gaaccataac agaaagaaga agaaagaggg ggatccgccca ggagttc 347

<210> 1356  
 <211> 330  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-G11

<400> 1356

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 gctactagat gaggtataat acttaataca ctgtagatgc aagggtctata gttgtaatta 180  
 caatgtaaat gctatgtaaa tagttgctga atgtgtagga tgttcaagtg tttgcatgtt 240  
 ggtacttgac tgaacttttt ttcttctttc gaaaggatgt caaccattg gttggctgaa 300  
 tccgtgaatg tggaactcat tgagtcgagt 330

<210> 1357  
 <211> 454  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-F10

<400> 1357

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 gagggtccg tgcaggggtg atccttatca cttgaagtcc tctctggcca gagtccctca 180  
 ccttcccaca gcccttgcta atgattacca taaaagctgc ctccggcctg gccttctagc 240  
 ctcagcccag tcaaaagtcc cacctttacc atttgatttg gtgtgtgccc ttagagggaa 300  
 ttcagagctc cgttaggctc atagagggggc ccagaccaa gatatggagg gaggggtccc 360



atatcagcaa acacctcaag tttcctgcac tgtgactgca ttttaagaagc aaagctttgt 420  
caggctctacc agagcagctg ataagcctgc agaa 454

<210> 1358  
<211> 449  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-020-Q1-E1-F11  
  
<400> 1358

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agcagctgac ttctgacaac agtcctttgt cttgaggcgg tgagtatctt ctgtgtttat 120  
tatgccagga tttcactgct gactatagat tcttcccaga ctgaggggct gaagatcgat 180  
catgtttcaa agagttcttt gaactgggct gtaggctaga gcagagatgt tttctttttc 240  
tgatcataaa tacttcaggt tcacaaacta cttcttcata atgccaaaac tggaatgttc 300  
tgtagtgggg acattatagc agcatacaca aatgctagga tggaaacatt agtgctggag 360  
atgtttgaca gaggatgttg cactacaaat gtaaaacaaa acacaggctt tgacaagaac 420  
aaaggattat aaaaacatgc ctaaaaatc 449

<210> 1359  
<211> 447  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-020-Q1-E1-F12  
  
<400> 1359

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gttgctgttg gccttcatca gctcctggaa tctagaaagc gcaagaggcc cattcagaag 120  
gtagagatgg gaacctcgag tcaaaacgac gtcgacatga gctggattcc tcaggaaact 180  
ctgaaccaga tcaataaagc ttcaccaaga aggttgccca ggaaacgggc acagaagaga 240  
tcagtgggat ctgatgagta aatgttcctt tgtgcaacaa ttcggtcttt acttaaccgg 300  
ccctaattgtt tttcggcctg atgggaatta gtgcagagaa gccatatcac catagaaggc 360  
ggctactact tatgtgtgga ctgagcaatc cgagtctgtg gcgatcatat tgctgaaaat 420

gcactgcatt tatttttcta aagtaac

447

<210> 1360  
<211> 370  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-020-Q1-E1-F9  
  
<400> 1360

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ctggaagtaa accgtgtctg gtttgaacc ttcgcttccg tgaatagaga ggggtggatta 180  
aatggttccc aggaagccct ctgcgattgt tgctcagtca ctcagttgca tccagctctt 240  
tgccggtcca tggactgcag cacaccaggt ttcttggtcc ttcaccgtct cctggagctg 300  
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ccttctgcct 370

<210> 1361  
<211> 292  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-020-Q1-E1-G10  
  
<400> 1361

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catggcatat gtgggaaagc ggcaggcctg aagcaaacga tgttctggct gtggtaagca 120  
gtgtcacagc atccctagtc agtgatcaca gagtcacctg ggttaaaagt ctaggtctca 180  
cagtcaaggc aaggattatg aaggtgacac ggcaaagggt gtctgaaggt gtcataaatt 240  
ttctcaaatt cagtggggaa gggaagggtg gaatgatgtc cttcaaggcc ac 292

<210> 1362  
<211> 442  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-020-Q1-E1-E12

<400> 1362

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tattgccagg aacacagtag ttattgttaa aatcagctgc actagatata atttgaaaat 180  
atccagcacc aggttaattc caataacgaa cccaatagat tagttaatgc tatgagaaga 240  
ctaaagagaa agagaaaaga gacgcagacc caggcctggc tccacatgct actaactacc 300  
agctctcaga tgtgtcactg ggaacaatac aactccatg cgttttgcta catctccaga 360  
agaggtaagg acttgagtcc acacggggat gctcgcttgc aagtccttga ggcccacagc 420  
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<210> 1363

<211> 375

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-B12

<400> 1363

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gggtttcaga cttgtgttcc tctccctcgt cctcctgtct ccttaggtct agtagaagcg 180  
gtggggaccc tctaccagct tcctgagccc tgctgcagt tggccacca gcaactgattg 240  
gggacaaggg ctgaactgct ggccaccagc cacacctagg aaggagctgg ggcctagaag 300  
ctaggcagcc ttcggcctca ggggccgctt cgtgccctcc cagctgggag gggtcgctgt 360  
ttcgcttgt ctgtc 375

<210> 1364

<211> 460

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-C10

<400> 1364

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gctggacctg caaaacaaca aaataactga gatcaaagat ggagacttta agaacctgaa 120  
 gaaccttcat aactgattc tcatacaaa caaaattagc aaaatcagcc ctggggcatt 180  
 tgctcctttg gtgaaattgg aacgacttta tctttccaag aatcaactga aggaattgcc 240  
 agagaaaatg cccaaaactc ttcaggagct gcgtgtccat gagaacgaga tcaccaaagt 300  
 gcgaaagtct gtgttcaatg gattgaacca gatgatcgtc gtagaacttg gcaccaaccc 360  
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<210> 1365  
 <211> 396  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-B10

<400> 1365

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 ccccatcgt gaggatcatc tccaggagca aagggccggc ccgggagccg caggtgtatg 180  
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 aggacaagta catttctaatt ttgtaacata caaccatagt ctgcaaaact attctgtgta 360  
 tcaactgacgc acatcccaaa ctgttttagtt ccagtc 396

<210> 1366  
 <211> 276  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-H12

<400> 1366

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 tcgagtactt gcacgaggta accaaccgc cagtgatcta ccgcgatctc aagggatcca 120  
 acatcctctt gggcgcaagc ttcaacgcga agctgtcaga cttctgtctg ggcaagcttg 180

gtccgagccg cgacagaacc catgtcatca caaaggggat tgggacctac tgggtactgcg 240  
ctccagaatt agccatgact gggaagctga ccaaga 276

<210> 1367  
<211> 455  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-A10

<400> 1367

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gtaatacgat gaacagcaaa gcgacccttg gtgtcataga tcaaacgaaa gttctctcca 180  
gtcttatcaa tgctgatgac atccataaaa ccagcagggt aggttatatc tgtgcggact 240  
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gcatacttaa gtctattcct taggaaaatg attaggggga gacactccct tagcttgtgg 360  
gggccggtag atggacgagg ggcaaacacg ccggtcagtt tatccagcat ccaatgtttt 420  
ggacctgcta ctctgtctcag gtacaaaatg gcac 455

<210> 1368  
<211> 420  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-A12

<400> 1368

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ccatcagctt agctcatttc aggtgagcca gcagccatac cttgggtccc ctgagaaggt 180  
cagtcagaga ctttgggtca aagttcctac ctttctgaac attctttttc tccaaggac 240  
attcacaaat agctacttga atgtatgatc atgttcaccc agtccaggca gaaatgggga 300  
cgccgttggc agggagtatt ctgactccct ttccgtggct gcaagtggtc tccagaaata 360  
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<210> 1369  
 <211> 277  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-020-Q1-E1-A4  
  
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 gttacatcta agtttactac aggtagggat atatgaatcc ttgaaataca atgtaccata 120  
 cctcaagtag aatgccatga tatkaggcat cctgtttcca cgcataaac atgaggatta 180  
 cgtggacgat tctgatgcta catacacata cgtagctaca caagacgggc taatcaaatt 240  
 cacccatcat caatcaacct aagaacggca tttcatt 277

<210> 1370  
 <211> 446  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-020-Q1-E1-A5  
  
 <400> 1370  
  
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 ggtgaacaac agcggcgagc tcaaggtggc ggacttcggg ctggcgaacc tcttcgcgcc 180  
 ggcgccggcg gcgcgctca ccagccgggt ggtaacgctc tggtaaccgcc cgccggagct 240  
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 cgcggagatg caacgcgcgc gccccgtcct gcagggccgc accgaggtcg agcagatcaa 360  
 aagatcttca agccccggtg gccaccgcc caaggacttc tggggccgct tggggctctc 420  
 ccacggcgcc gtcttcgcc cgcagc 446

<210> 1371  
 <211> 401  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-019-Q1-E1-F9

<400> 1371

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ggcagctacc cacaagatcc cactctctga ggacacgaag aagaatgggg tgaccgtgtc 180  
caagctgata aattatcctg tgagaggcct ggtatttgag ggaggggaaca ccctggacga 240  
cctggccact gtggttttcta atgcttgcat ttggctgcaa gacaacaatg tgccttacia 300  
tgtgtcatt tctgactgtg gcaagagggt tttcctgttc cccagtgct acgcagagaa 360  
gcaggctctg ggtgaagtga gccaggagct gctggacact c 401

<210> 1372

<211> 236

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G1

<400> 1372

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ctcgtccacg gcggtcatg cggggcccc aggtgtgcg ccggtccaa cagcagtacc 120  
agctacaatc tggaaatggt tcacgggac cgccacctgc tacggtcagc ccaacggtgc 180  
cggcgtcct gacaccggcg gtgcgtgctg tctcaagaac gtcaacctgt caccct 236

<210> 1373

<211> 335

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G11

<400> 1373

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gaggccgccg tctccacacc caaggttgcg cccgaggcca ctccaatctc cggttgaggtt 180  
gaggctgatg aacaggtagc tgagaagggtg gtgggtggagg agccggctgc ggccggccgac 240  
gttgagcatc agaaggctaa tgaggtgggtc gctccagagg cggccgtcgc cgagccccgat 300

cacaaagagg aggaagccgt ggagaagacc gtcgt

335

<210> 1374

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G2

<400> 1374

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aggagcaggc ggtgagggcg gaggcggacg aggtgaagag ggaggtggcg aaggcgcacg 180  
acgaggagga ggcggtgcct gaggagaaag acgtggcggg tgtaggggag gaggtggagg 240  
cggaggcgga gacggagaca gagactgaag gcgaggcgga ggcagaggtc gaggccgagg 300  
tggaggtcga ggtggaggcg gaggccggtg catcgtctgc gaagaagaac cgtatccagg 360  
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<210> 1375

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G4

<400> 1375

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gagctacaag caaccgacc gagcgaaatg agcatggaca tcgtcaagtc gcgagccctc 120  
tgaaacagcc ccggccgctg cacctgcacg ctgcaggggc gcatcggctc ctgcatgccc 180  
gtgggtcgtc gaatccttgc ttgtgtgttg ggaacggctc tgtgttttcg tgtccttgtt 240  
ttcctggaag caaaagccct gcattctgta tgagactgta tgccattttc catctttttc 300  
tctccccata tctctgccct agtcctgcta ccgctgtaga ctagaactta tttggtgttt 360  
gatctcgtgg cattgtcgag tcttttatgt gtctatgcaa tgcta 405

<210> 1376

<211> 387

<212> DNA



<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-H10

<400> 1376

acgcgtccgc atcgagcccc acccgacgcg acgattcctc tcctccgccc gttcccaccg 60

atctcacgct ctctctctct tcctccgctg cgtcgggtcg gcgtcgccat cgccggccat 120

gggttgcggt ggctccaagg aggcctggc caccggcaac accagcgccg gcagcaaggt 180

cctccggagg aagccctcct ccgtctccac cggcgcaagc cacacatcca ccacgtcgcc 240

gtcgtcctcc ggcgtcgtcg tcaaggacgt cgtgaaggat gcggcggcgg ccggcgaggt 300

gatgacgccc gccgacgccg agaagcctat ctctgtcgac cccaaggag acgccatcgt 360

ggtgatgggc gccaaagaaag aaggggg 387

<210> 1377

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E12

<400> 1377

tacaagactc tatacagacg tcgtagtata gtgcatggtg agaaggaaga gtcaaagggc 60

atcgatgcga aagcgtccgg gcctgggtggg tccttcgaca tcaccaagtt gggcgccctcc 120

ggcaatggca agacagacag cacgaaggct gtgcaggagg catgggcatc ggcgtgcggc 180

ggcactggga agcagacaat cctcataccc aaggcgact tccttgtcgg acaactcaac 240

ttcacaggcc cttgcaaggg cgacgtgacc atccaggtgg atggcaatct gctggcgacc 300

acggaccta ggcagtacaa ggaacatggt aattggatcg agattctacg cgtggataac 360

ctggtcatca ccggcaaagg aaaccttgac gggcaaggcc ca 402

<210> 1378

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-F10

<400> 1378

ttcacgggtg cacgcacgcg tccgcacgtc tcaccctccc tccctcacac aaataataag 60  
gaaagggtccc gcccttttcc tccgacatcc acagggggga ggggaaaaca cgtgcattca 120  
cccgccggca ataatggcct cggttccggc tccggcgacg acgaccgccg ccgtaatcct 180  
atgcctatgc gtcgtcctct cctgtgccgc ggctgacgac cccaacctcc ccgactacgt 240  
catccagggc cgcgtgtact ggcacacctg ccgcgccggg ttcgtgacca acgtcaccga 300  
gtacatcgcg ggcgccaagg tgaggctgga gtgcaggcac ttcggcacccg gcaagctcga 360  
gcgcgccatc gacgggggtca ccgacgcgac cgggacctac acg 403

<210> 1379  
<211> 334  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-019-Q1-E1-F3

<400> 1379  
ccaacacgga tggcatccac atgggcgact catccgggat cagcatcacc aacaccgtca 60  
ttggcgtcgg tgacgactgc atctccatcg gccccgggac ctccaagggtg aacatcaccg 120  
gcgtgacctg cggccctggc cacggcatca gcatcggcag cctanggcgg tacaaggacg 180  
agaaggacgt cacggacatc aacgtcaagg attgcactct taagaagacg atgttcggcg 240  
tccgcatcaa ggcgtacgag gacgccgcct ccgtgctcac cgtctccaag atccactacg 300  
agaatatcaa gatggaggac tcagccaacc ccat 334

<210> 1380  
<211> 400  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-019-Q1-E1-F4  
<400> 1380

gggtcgagga cgcgtccgat ttttcaagct tttctctaac ggaatgaaaa aaccggttaa 60  
aaaacatgca accctaaaaa ttacggaccc aaaggaaacg gccctcaggg acctttaaac 120  
cttaagggtat agtggaagt ttggaactac tgagcccact cttctgctgg atatcttgat 180  
ggctgccgac aaatttgagg ttgtttcatg catgaggtag tgcagccagt tgctcacaag 240

cttgccgatg accacagaat ctgcacttct ctacctagat ctcccttgct caatttcaat 300  
 ggcagcagca gttcaacctc tgacagatgc agctaaggat ttccttgctg taaaatacaa 360  
 ggatttgact aagttccaag atgaagtgat gaacattcct 400

<210> 1381  
 <211> 403  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-019-Q1-E1-E1  
 <400> 1381

ggtcgagccc gcgtccggag atactggacg tcgcaaaatc acctcggtcc gtcagcagcg 60  
 gaaaccaaag tcaggattcc gttatgcttc gcgggagaga gaagtcgtga ttacagtcga 120  
 gcatggagcc acgggcattc cccacccaa ccgcggcatc tgccagtctg cgacactgcc 180  
 gccccagcag tggggcaaac actgtcgtcg gcgccttgga gctttggatt ggctgggcgc 240  
 gcgaccggcc tctgtctcca ggctgcgagg cagcagcaac ctccctcgct ggctgatgac 300  
 cgtcttcgcc gcggatccaa ctcccaacgt ggtcggttg cttcccgctg tcaccattgt 360  
 gaggtcacga ggatttgaag aatcacctg gtaactggga tct 403

<210> 1382  
 <211> 397  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-019-Q1-E1-C3  
 <400> 1382

gtccagcacc aggactttgc tcgcataccc tctccatcct tgtgaatgat tgtcctggtg 60  
 ttctcaacat tgtaacagga gtctttgctc gcaggggcta caatatacag agccttgctg 120  
 ttggctcagc tgagaaggaa ggcatttcac gtattacaac agttgttcct ggtactgttg 180  
 aatccattgg gaagttagtt cagcagcttt acaagcttat tgatgtgcat gaagttcatg 240  
 acattacca ctacctttt gctgaaaggg agctgatgct tattaaagtt tctgtaaaca 300  
 ctgctgctcg gagggaaatt ctagatattg ctgaaatctt ccgagcaaaa cctattgacg 360  
 tttctgacca tacagtaacc cttcagctta ctggaga 397

<210> 1383  
<211> 309  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-C9

<400> 1383

gggccacgca cgcgtccgag gacgagtggg cggcaaggtc gtggggctgc cgctgccgcc 60  
gtcctacgcc cccgcgcgct aagacgacga aggcctcggt ttctcctcgt ggtctgacca 120  
tccaatccaa actcaaaaga acaaatacga aagaaacgta gtgaagggga acaaataaat 180  
gggtatatgt aatcttgaga tgcattgcct ctcaaaacac tgtactgggg ttctcaaaaa 240  
aaacattgtg atgggaggtta tatatataac ttatctcac catttattta caccaacaag 300  
tcattgggt 309

<210> 1384  
<211> 382  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-D10

<400> 1384

acgcgtccga acaccatcgc cttcaaccac ttcggcagag gcctcgtgca gaggatgcc 60  
aggtgccgct ggggcttctt ccacgtggtc aacaacgact acacgcactg gctcatgtac 120  
gccatcggcg gcagcaaggc cccaccatc atcagccagg gcaaccgcta catcgcgccg 180  
cccaaccttg ccgcgaagca ggtcaccaag cagcatgaca cgccggagtc cgtgtggaag 240  
aactgggtgt ggcactccga gaacgacctt ttcatggagg gcgcctactt caccgtcacc 300  
ggcggccaga tcaacagaca gttcaacaag aaggacctca tcaagcccag gaacgggtcc 360  
tacgtcacca agctcacgcg ct 382

<210> 1385  
<211> 385  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-D12

<400> 1385

cacggggcca tacacgcctc tacaatgact cgctatagct atttcttctc gcctctccca 60

ccggcccgggt cgcccggagt agcaagcgtc tccgatccga tccatcgtgc gagcatatcc 120

acggcgatgg aggcgagagc ggccatgagc tgggtactgcg gctcccttct ggccgtggcc 180

atcgcgctgt tctgttccgt gtccctcggc gtgcgcgcgcg ccggcgccgg cgccggcgctc 240

gacatcaagg tgtcgtgtgc agcgacgccg gaccgggacg tgtgcctgcg cgcgctccag 300

gcgacagcg actccaagac cccgcgggac ctggcggaag cggcgctccg cgcgcgacg 360

accgcgggcg gcgcggcggg cgact 385

<210> 1386

<211> 349

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-D7

<400> 1386

tacacgcctc tacactgagt ctgataaacc gacttcatgc gcgcgttccg cgaacatttc 60

gccgactacc tcggtaacac catcgtggac atccaagtcg gcatgggccc cgccggcaag 120

ctgctctacc cgtcctaccc ggagagcacc ggcacctgaa agttcccagg catcggcgcc 180

ttccagtgtg ccgtcaggta gatgcgtagc cgcttgcaag cagtacctga agcggacgtt 240

caacctgagt ggggccacgg taggccaacc gacgctggtg gctacaacaa ctggccggga 300

tacatagtct tcttccgcgg cgaaaaccgt ggggtggagca ccgattact 349

<210> 1387

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-D8

<400> 1387

ctcgcgggtc gacacacgcc tctacacaca cgcttgcaa cgattcctct cctccgcccg 60

ttcccaccga tctcacgctc tctctctctt cctccgtcgc gtcgggtcgg cgtegccatc 120

gccggccatg ggttgcggtg gctccaagga ggccgtggcc accggcaaca ccagcgccgg 180

cagcaaggctc ctccggagga agccctcctc cgtctccacc ggcgcaagcc acacatccac 240  
cacgtcgccg tcgtcctccg gcgtcgtcgt caaggacgtc gtgaaggatg cggcggcggc 300  
cggcgagggtg atgacgcccc cgcacgccga gaagcctatc tctgtcgacc ccaaggcaga 360  
cgccatcgtg gtgatggacg ccaagaaaga agaaggcaac aac 403

<210> 1388  
<211> 381  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-019-Q1-E1-C11

<400> 1388

ggtccacgac gcgtccgcat cctattcccc cccgctaaaa cccacccaac cgccgcgcgc 60  
cgccggcggc gcaagggacc cacgatggcc atgcaggtgg tgcgcaacct cgacctggac 120  
cggtagcgcg ggcggtggtg gtgaacgaga cgtggggcga cgggcgcgcg gccacatcg 180  
aaggcacngc ctggcgcgcc gacctgccg ggcacgagc caagctcaag gttcgcttct 240  
acgtgccgcc ctctctcccc ctcatccccg tcaccggcga ctactgggtg ctccacatcg 300  
acgccgacta ccagtacgag ctcgtcgggc agccctccag gaactacctc cggatccttt 360  
gcangcagcc tcacatggac g 381

<210> 1389  
<211> 411  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-B12

<400> 1389

cacgcgtccg cacacgcgtc cgcgcgtcta ttgcgacacc tgccgcgcgc ggttcgtgac 60  
caatgtcacc gactacatcg cgggcgccaa ggtgaggctg gactgcaagc acttcggcac 120  
cggcaagctc gagcgtcca tcgacggggt gaccgacggg aacggcacgt acacgatcga 180  
gctcaaggac agccacgagg aggacatctg cgaggtggtc ttggtggaga gcccgcgcaa 240  
ggactgcgac caggtgcagg cggacagggg ccgcgccggc gtcctgctca ccaggaacgt 300

cggcacacagc gacaacctgc gccccgcaa cccgctcggc tacctcaagg acgtgccgct 360  
gcccacatctgc gcctcgctgc tcaaacagtt ggactcggac gacgacgacg a 411

<210> 1390  
<211> 382  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-B3

<400> 1390

tggtagggct tgctagctag caaaaactgt tggtatggc ccccgtaac cgcgcggaaa 60  
tggtgttcgg cctcctcgcc cacaatcgcg gcgaaaggca gtccgccatg ggcgtcgccg 120  
tcggctgtca aattcacagg tccggtcatg atgccaaggc tttcccgctt tgctgctcct 180  
ctcggaggcg cgtccacagg tcacggcggc ggacgggtgg gcggggtac ggtgcgagtg 240  
caacccgagt cagggtcggg tttcccgagc cgcgtcgccct ctggtctcgc cgctccggtg 300  
gatgatggag cgcgtcggcg tcggcgtcgt tggatccctc tctttgcgcg gctgcggatg 360  
ggttgaggcg acagcgaccg aa 382

<210> 1391  
<211> 347  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-B9

<400> 1391

acgcgtccga aaagcattcg gaacaacaag accaagggtat tatgcaccaa cgcccaaggg 60  
aagaacaaag ggtggctcca aggggcttga aggggtttaa aacccccctg aatgggacca 120  
ccccccccag taaaaatttt tccccgcctt gtgaattgcc caaaaagggt gtccactggg 180  
gagccccaca cattaacgcc aaaaaacccc cagccaaata agttctaccg ggggagaacc 240  
cccaattttt ggggggaaaa ttaatttccc aaaaacaacc aaaatcaagg ggtgaaaaaa 300  
caaaaaaaaa aagaaaaaaaa aaagggggggc gcccacaaag attcaaa 347

<210> 1392  
<211> 409  
<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-H10

<400> 1392

taccggtacc tggactccgg acggacgcac gcgtacgccc acgcgtccgc aagccccgca 60

ccgccccgcc cgcgcccgcc tccgccccgc cgcattgagac ggggtcggca cggggcgatg 120

aggagcagcg aggccatgga gctcctgggc ttccctcgct actccaggcc ctccccttcc 180

gaggtgaagg ctgcgtatag aagaatggtg atggagtccc atcctgatcg tgtctcaacg 240

catctgaaat cgcacgctga gtcaacattc aaggagatag cagaagcata ttcatgtttg 300

aaggacggaa gaagatcagg gagtangatg gaacttcatg ttatgcgttc tgggtgttcaa 360

ctagccacgg aagatcaaat agaacgttgg gtacagcccc gtttctact 409

<210> 1393

<211> 281

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-H12

<400> 1393

ctttggcaac aacgaatact gaaagacctt ccaaactagc atgaagtgcg ggcaccttgc 60

ttttctttttg ctttcttttt gtgaaaacgt gtgcttagcg acaatgctgg caaagtgtta 120

gaagcatctc tggaatgctt cgtgtagtat cttttgactc tcttttcttt tgcgtctca 180

atcatgttac atgagaaatg cctgatggac tcaaataatg aaccggtgat tcaaaaacca 240

aaagcctctg atgaatctat ttgagggttt ggatcttgat c 281

<210> 1394

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-F2

<400> 1394

acgcgcggga cgatgcaagc ctctacactg agtcgcatta ccatccctca actcgcgcgc 60

gcacggccgc atccgcggca cgcgcgccg catcccgatc cgcgcgcaaaa ccggatccgc 120



cgccgccatg gcggtggacc gcgtggacgg cgaggaggcg ttcgaggagg tggacccgac 180  
 ggggcggttc gggcggtacg cggacgtgct ggggctcggg tccgtcaaga aggtgtaccg 240  
 cgggttcgac caggaggagg gcatcgaggt ggcgtggaac cgtgtccggc tgcggtcgct 300  
 ggccgaccgc gaccccgga tggaggagcg cctccacgcc gaggtgcgcc tcctccgctc 360  
 gctcagccac gaccacatca tcggcttcca caaggtgtgg ctggaccgag acgcccgggt 420

<210> 1395  
 <211> 433  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-F3

<400> 1395

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 cggcgtggcc tacgaccact gcatggcgct gctgggagcc gaccccgca gcaaggacgc 120  
 cggcaacaag aacatgcacg ggctggcggt gctggccacc aggatggcca tctaccacgc 180  
 cgccagcacc gagtccaaga tcgacgacct cacggagctg gacgcggcgt cgtcgatcc 240  
 gcaggctcgc gcccgcttca accactgcct gtagcagtag ggcggtgccg ccgacctcct 300  
 ccgcgactcg ctggacaacc tcaaagcgaa tatctactgc atagccatgg agcatctgac 360  
 cgccgcaatg ggcgcctccg agagctgcga agacgcgtcg aacggccagg aggaagatgt 420  
 ccccgctgcc gct 433

<210> 1396  
 <211> 447  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-F4

<400> 1396

acgcgcggga cgatgcaagc ctctacagtg agtcatgcga gagaaccgac ttgccaccgg 60  
 ctgctcgccg tctctctctc tctccctcgg ggcgcgcgcg cgcgggagac aggccaaccg 120  
 atcgccaggc cggcagccat gggcaagcac ggcaagtgc gccacgacgt ggaggcgtgc 180  
 taccgcccgg gggcagcggg cggcggcaag taccggtaca tgacggagaa cccgcagctg 240

cgggtgggcct tcatccgcaa ggtgtacgtg atcgtgtgcc tgcagctgct gctgacggtg 300  
 gccgtcgccg cgacgggtgaa cctgggtgccc gccatogggg acttcttcct ctcccgacc 360  
 atgggcgcca tggtcgccat catccgggtc atcgtcgccc ccacccctgt gatgatcccg 420  
 atgatcagtt accggaagcg gcaaccc 447

<210> 1397  
 <211> 112  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-018-Q1-E1-C11  
 <400> 1397

ctaagacata aggaactacg tatgtttatg gaactttctt taagccatat atttctcagc 60  
 atgagaatga catcgaccga aatcgtcttg agctcagaac tcgaaccaac ga 112

<210> 1398  
 <211> 98  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-017-Q1-E1-H9  
 <400> 1398

cgggtccgata ctcacgggtg gcacacgcgt ccgaaataaa aaaaaaaaaa aaaaaaaaaa 60  
 aaaaaaaaaa gggaggaagc acaaaagaga aaaaaaca 98

<210> 1399  
 <211> 456  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-018-Q1-E1-A11  
 <400> 1399

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 ggaactttct ttaagccata ttttctcag catgagaatg aaatcgaccg aaatcttctt 120  
 gagctcagag ctcgagccac cgatatgggt gtcctttact tccataaggc tgcttcggta 180  
 gggcaaaata ctttctttga cgttttaaaa tatgttgctg cccagtcccc ttctcgaaa 240

tcaaggctgc accctcatca ggaaccacag cagcagcaac cacaagtgca ggtggagctg 300  
cagcagcaac cacaagtgca tgtggagctg cagcagccgc aaccacaaaa acaagcagca 360  
cctgttatgc gcagaggagc atctattgct ggtcggcaag cagcaatggg acagcagtct 420  
ctggagacta taccggttcc atcttcaccc aagata 456

<210> 1400  
<211> 483  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G11

<400> 1400

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gctaaggctc aggttctcaa agagcagctg ctgtagctgc tctatcctct gttgctgact 120  
gctgagcaat ctggatcttc agaatttcta cgatccaaag ctagcaacac agcatataag 180  
actgatgtcg accggattgt cataactcca gctggcccat caggcccatc ttctcctcag 240  
tctgaagctg gggagtccaa tgtgtttcac caggaaaaag atgctgcagc agatggggca 300  
ccgcctgaca ctgatggagc agtggctgag gccggagagg aagaaacaac ggaaaatggt 360  
ggtgaagcga catttagcta tgaccgcttg atatccaaat ccaccgattc agttcgtggg 420  
atagattaca aacgcagaga ggcatactta tcagatagtg aattccaaac tgtttttggc 480  
atg 483

<210> 1401  
<211> 352  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G12

<400> 1401

cccagtcagg atcctcctaa tcccgggtccc gttccaccaa ccccgccccg gagaacaaac 60  
aacttggggc ccaccggaga acgggtcaac aaaggccaac caagggtgca agcccgaag 120  
tatcgacgcc ggcaaggcct tgggcccgcc cgcgggcgtg ctcatcaacg gcaagggcgg 180  
caaggacctg taggccgcgc ctgccttcac cttcgaggcc ggcaagacgt accgcctccg 240

cgtctgcaac accgggatca acgcgtcgct caaacttccg catccaaggc cactacatta 300  
aactgggtcca actggaaggc tcccacaacc tgcagaacac gttcgactcc ct 352

<210> 1402  
<211> 236  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-H10

<400> 1402

aaacactgtc aaacaaaaat aattttacca aggaaaacgg aaacggaacc aagaaggaca 60  
acaacaacaa taacatctta accgttgaat tgccccaag gttctctcca accccaaacc 120  
tgtcttcac aataaagggg cccgcttcat tgggaaacca aaccctacc gtacgtgcct 180  
tcggaagggt aaagcgacag gcagaactaa ctacaccggc aaaaccaacg agcatc 236

<210> 1403  
<211> 425  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-017-Q1-E1-H12

<400> 1403

tcgccaagc cttcgccgac gccttggccc gggcctcccc ttccgcaac aacaaattca 60  
accaagcaac caaaatgttc ccccttaaaa ctgccggggc cctttaaaat cccgccttt 120  
gcggccctaa ccccgccaa ggccccggaa aattcaccga aggaaggcag tgctgcaaag 180  
gcacctgagg ctgcaaagag aactgctgcc cccgctgaag caccggagc cgcgtccacc 240  
cccgctgccg ccgctggccc atcatcgctg tctaggaagt ctggtccagc taccgcgcca 300  
gccaccgct ctacacccc ttcttccacn gacgaggagt tgagcccttc cccgccagca 360  
tccaccgccg cggcgctccc tgcggctgan ggaacggctg ctgatgactc cgcggtgctg 420  
ctgcc 425

<210> 1404  
<211> 402  
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G10

<400> 1404

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ggcgactcgt ccgggggtcac catcaccaac accgtcatcg gcgtcggcga cgactgcac 120  
tccatcggcc ccgggacctc caaggtgaac atcaccggcg tgacctgcgg ccccggccac 180  
ggcatcagca tcggcagcct aaggcggtag aaggacgaga aggacgtcac ggatatcaac 240  
gtcaaggact gcacgcttaa gaagacggcc aatggcgtcc gcatcaaggc atatgaggac 300  
gctgcctccg tgctcaccgc ctccaagatc cactatgaga atatcaagat ggaggactcc 360  
gggctacca tcatcatcga catgaagtac tgccccaaca ag 402

<210> 1405

<211> 350

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G1

<400> 1405

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ccgtcattct gcgacaccgc cgttccattc cgtcgcgccc tccaacggca ctcgggcagt 120  
cagggatgga gatgaagaag atcaccggcc ccgtcctcgt gccaccgcgc gaggtcaccg 180  
gtaccacgc cgccagaagc gccaatccga gcctcatgac ctggaccgcc atcgtcacga 240  
tcgtcgtctg cgctccctc tcgaccgacg tctgctacat ctgcttctag tacatgcagt 300  
caacggcatg ctgcgacgcg tggcccaagc tcaaagcagc gtgacagata 350

<210> 1406

<211> 457

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E11

<400> 1406

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acaagggcgt ctgcaatttg tgattctaaa accaatcctg ggcgttaaca ctttcatact 120  
 ttacgcaaaa gggaaatatg aagatggaaa cttcagtgtc aaccagtcct atctatacat 180  
 aactatcatc tatacaatct cataactctac ggcattgttt gctcttgacac tgttctatgc 240  
 ggcatgcaga gatctacttc agccatataa ccctgtcccg aagtttatca taatcaaadc 300  
 agttgtgttt ccaacgtatt ggcaagggtg gctgggtttc cctgctgcaa aatctgggtt 360  
 cataaaaaat gccgagaaag ctgcataatc ccagaacttc gtgctatgtg ttgagatgct 420  
 catagcagcc attgggcacc gattttcctt ctcctac 457

<210> 1407  
 <211> 137  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E12

<400> 1407

gtttcacaat ttatccttcc ccacaggtgt caacagctgt tgtaaagcca tacaacagtgc 60  
 tcctctcgac ccactccttg ctcgagcaca ctgatgttgc agtcctcctg gacaacgagg 120  
 ctatctatga catatgc 137

<210> 1408  
 <211> 347  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E2

<400> 1408

caacacccaa gaggagtcg gattagtggc gatgaggtcg tccgtggccc gcttgattcg 60  
 ctctctctct gctcgcctt cactctcag tggaaatgca ttcttcggca atgccagacc 120  
 cagtgatcag aggcacattg agaagccttt taaagtgaag gaggcagaac ctgtgaatgt 180  
 gacaaaacct tcaccacaca agctgctggt tctaggagga agtggtttcg ttggatcaca 240  
 cgtttgcaaa gaggttttgg acaaaggtct aggtgtctct agtcgtaata gatcgggaaa 300  
 gccatcctta aatgaacctt gggtgacaa agttatatgg aaccaag 347

<210> 1409

<211> 467  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-017-Q1-E1-C10  
  
 <400> 1409  
  
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 ggccctcggcc tctgcaaagc ccgcttccaa cggcgaggcc ccctccggcg cccgcgaggt 120  
 ggatgtcggc gaggagtaca cgctcgccgg cgttctgcgc agcttcgtcg acggcgtctg 180  
 gtacccggac gagccgctgc tccggcggct ccggcgggcg tcctgcgaag gcgcgccgcg 240  
 gctgaagggg gcgtctcgga actcagcgcg ggatctgctc gagtgggcaa ggcaaggcag 300  
 cggcctccgc gccatcctcg tcctctcggt ccggacaatc atgcctatan cattgactgg 360  
 ccttttaatc ttcatgttct ttctgcta atgccaactg aatgcgatca tcgtctcagc 420  
 cctgatgtca ctggccgctg ctggcggatt cttggctatc ttctttg 467

<210> 1410  
 <211> 313  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-017-Q1-E1-C11  
  
 <400> 1410  
  
 gaagagagcg gcggagagcg gcgaagcggc cgaggcgaag aagattcagg acgacttctg 60  
 ctcgacgctg tgcgaaggca agaaggggac ggacctggtc gtgtgcaaag agtcctgcgc 120  
 gctctcccag cagtccaacc tgggtgctgta cggcaggatt cagtgcgaagg gcaaatgcac 180  
 cgagcagaag ggcatacagg cgccgggcat gaaggtctgc caagaggagt gcgacaaggc 240  
 gtacgtggtg aaggcggcgg aagtcaccaa ggctgcagc gtcacctgcg ccaaggagaa 300  
 gaacccgcgc ctc 313

<210> 1411  
 <211> 246  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-A12

<400> 1411

ccggttgcat ccaccaaattg gtggatattg gatattgaaa agttgggggtc acaatttttg 60  
ttcccatagt cgtaacgatt agccatctgt caaagtactc cctctcttcg ttgaataagg 120  
tctattgtca tttttatcac aactgcggt atttagatga ataatacaca agcatttgag 180  
gattcaaata gaccaatcct gtgcaaattg tcgtactctg agaatatagc accagagtgn 240  
tacatc 246

<210> 1412

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B11

<400> 1412

cccgccttt cactgccttc ccctcaacaa cattaagggtc cccccctttc cgacattcac 60  
acgtgggaca ggaaatcacc ggccatggcc tcaattccgg cgacgacctt cgccgtcatc 120  
ttatccgtcc tttttctgtc cgcggtggc accgcgctcg acaacgacct ccccgactac 180  
gtcatctact gccggtcta ttgcgacacc tgtcgcgcgg ggttcgtgac caatgtcacc 240  
gagtacatcg cgggcgcca ggtgacgctg cactgcaaac acttcggcat ccggaacctc 300  
gagcgctcca tcatacgggt gaccgactgg aactgcacgt acacgatcga gctcaaggac 360  
agccacgatg acgacatctg cgacgtggtc ttggaggaca gcccgcgcaa ggactgcgac 420  
caggtgcatg cagacacgga ccgca 445

<210> 1413

<211> 185

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B12

<400> 1413

gcgtccgcc acgcatccgc ccacccttcg gccaaagcctt cgggggcaaa atgcctccgt 60  
aacttcggag gtcacaaca ttggaatac tgacatggac cggtcttagc ctcgcggaaa 120



aaaattgtaa cttttgtaag caagagccac ttctttgaat atatgacct aacaacgctg 180  
ccctt 185

<210> 1414  
<211> 385  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-017-Q1-E1-A11

<400> 1414

cttaattaca ggccaaacct aaccaggcct gacaggattt cttggaaaac atacttcaat 60  
aaccacctca tgtgcgaaat caagggccac cacctgacct ccgctgccat agtcggccac 120  
aacggcgccct tttgggcccc gagcaccgca ttcccacagt tcaagacaga ggagatgacc 180  
aacatcatga aggacttcga cgagcccggg ttccctggccc cgaccggcct cttcctcggc 240  
cccaccaagt acatggtcac ccaaggcgag cccggcgctg tcatccgagg gaagaaggga 300  
tctggangca taactgtgaa gaagacaagg caagcgatgg tggtcggcat ctacgacgag 360  
cccatgaccc cgggccagtg caaca 385

<210> 1415  
<211> 347  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-H1

<400> 1415

actggagtgc aacgtccaaa ttgcatacat tgccctggatc gcacacatgt tgctcagtat 60  
gcatatggac ttgctgcttt ggggaggcaa cttcatgcaa tgggactgac agatgtttta 120  
aaaatccacc ctgatagcag cattgcttct gctttgatgg aaatgtacca gagcatgggt 180  
gatgcacttg ctcatcagta tggaggatct gcgggacata acacggtttt ccctgagagg 240  
caagggaaat ggaaagctac tactcaatct cgggagttcc tgaaatcaat taaacggtat 300  
tacagtcatg cctacactga tggtgagaac caagatgcta taaatct 347

<210> 1416  
<211> 278

<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-H10

<400> 1416

gcacacgttg agatggttgt ggctttggtg ttcttggtcc tatgcttcat ggtgcggtcc 60  
 tccgactctc gcccacatgca tgtccatcac tgtaacttag tgcacagggg gtgctgggtcg 120  
 ctaatctgat atctgtatgg cgggcctacc ggctgcctgt cgcgactata ttcgtgtgct 180  
 gctgcgggta caccgacgtt aacaatcccc cttcaagag catgggagca tgtggcaata 240  
 tccgcaatct tcaaggattg tctgggttgt gggtcctg 278

<210> 1417  
 <211> 382  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-H4

<400> 1417

caagtatgcc acatgttttg actgcgccga tcagctgaaa tcgagcggca tgagctgccc 60  
 aatctgtcaa tctcctattg atgatgttgt tctggcgagg ttgaattttt gagcttagaa 120  
 tttagaaaag gccaaagagaa aaagagccgg cactcccaga tttagacgtg gagtttgcca 180  
 agccctgggt ttgaggcggc ttcttacctt tttgcttaac caccactaaa gaaatacgag 240  
 ctagttcttg gagaaaatgt aaatatgttt ttttggcgca agagcgggtg gcttgtatcg 300  
 cactaaagga aaacagagtt caaataaaat gccggttgta atccccgtaa gttccacatc 360  
 acttgttcac ggagagaatg ta 382

<210> 1418  
 <211> 411  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-H6

<400> 1418

acgcgtccag gcgtcaagtg cggcccaggc cacggcatca gcgtcggcag cctggggcgc 60  
 tacaaggacg agaaggacgt ggaagacgtg caggtgacgg ggtgcacgat cgccggcacc 120

acgaacggcc tgcgcatcaa gtcgtacgag gactccaagt cgtcgctcaa ggccagcaag 180  
 ttctgttacg agggcatcac catggacaat gtctcctacc ccatcatcat cgaccagaag 240  
 tactgcccc acaacatctg cgtcaagtcc ggcgcccca aggtggccgt caacgacgtc 300  
 gtcttcaaga acatccacgg cacctccaac acgccggagg ccatcacgtc caactgcgcc 360  
 aacaacctgc catgccaggg cgtgcagctc gtcaacgtcg acatcaagta c 411

<210> 1419

<211> 407

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-G4

<400> 1419

acgcggccaa cccgcccccc aagcccaccc agcgcgacga agctgggggg cgatcgctcc 60  
 agcgcgcgcg gcgacatcgc cccgggagcc gccgggggta acccgctctc tgtcccgctt 120  
 caacgaaccc tcaggtccaa gtagtctgtt tcgtgagtta tccacagttg cgccgcaatg 180  
 atgagtactg ctaatcgcta ccaacacatc aggtcaacta agcctgttgt aggcaacgca 240  
 ataaaattga aggatctcat gataaacagt gacaatacga tatgtgctga ctgtgggtgca 300  
 cctgatccca tatgggcacg tgctaataatt ggagtgtttc tttgcttaaa atgtggagat 360  
 gttcatacgg gacttggacc tgacatctca aacgttttat ctgtaac 407

<210> 1420

<211> 205

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-E7

<400> 1420

cgcgtccagt ggaggcgggtg tccaatgcct gtggaacgct gtgtactaaa cggacatcag 60  
 cccaggtgt tcatccactc cgttcactcc tctgtgctct ccgcggtcag gaacttcggc 120  
 aacttcatga aggtgctcat catccaggac aagatcagca gagctctgag tccgtcgggtg 180  
 gatgacatca ccaagtaggc agaca 205

<210> 1421  
 <211> 310  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-016-Q1-E1-F10  
  
 <400> 1421  
  
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 ctgataggac ggcatttagg gagacactga tgaaccattt gcaggaaacg gcacttaatc 180  
 atgtgaagac cgctgggctg ctatgtgatg gattcggctc cacaccagag atgagtatac 240  
 gggacttatt ctgggtggtt agccagatcc aggctatcgt ccagcgttat ccatgctggg 300  
 gtgatactgt 310

<210> 1422  
 <211> 398  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-016-Q1-E1-F2  
  
 <400> 1422  
  
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 agacgtacga taacctgctt attttgcgac ccattccggt cccacgcaa ggccgagc 120  
 gtgatctccg tccgtgccg catggcctcg caccgggcgc tgctgctgct gctcctcgcc 180  
 gccgcgctcg tcgctgcgct ggcctctgtc gcatccgccc acgacgcaa cgccatgccc 240  
 accatcctga cccccgtggc gcataccccg ctggggtcct tcgacggcga caagccggcc 300  
 tctgacgacg acgccgtcga cgacgacgag gacgccgccc ctgtcggcgc gcccaacggg 360  
 gccaccatga ctgaacccaa gggacgacgt cctcgccc 398

<210> 1423  
 <211> 189  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-016-Q1-E1-F4  
  
 <400> 1423

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gtcttccctcc ggggcgatcg gcgggtggta gcacgtgcgt actgggagtt cttcatgagc 120  
tggtattccc atatgtcctc gtcgcacggc gaccgcctcc tgcgggtggt cacggtcgtc 180  
ttcacccggg 189

<210> 1424  
<211> 213  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-F6

<400> 1424

tggtctctctg tggcctccgc cgctgtggtc cgtgccgctc ccgggcgcct tgtggggttg 60  
ttcttccctgc tggtcgctcg cttttgctcc ttctcggggg tgctcggggc cggcgccgcc 120  
tcgttccctcg ctttggtggg cgctctctcc gtgtgcgcct ctttccctgtc tgtctctggc 180  
ggtcgcgttct ctgtgcgggt ctgccctccc gtg 213

<210> 1425  
<211> 274  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-D11

<400> 1425

aatatatact ttccggtgtaa gacgagccgc cgcacttagg cggctactgc acagtcagca 60  
gaatgaaccc atttctgaaa gccttgggac gacacagggt tgttttgggt cagccacacg 120  
tttcaattgt cgctgtccct actttgatcc cggagtactg atagcttgtg ttctgttcac 180  
gattgattca ggtgtcattc ctttgttttg cgtgtttttt ttctgctctcc ttttaacgct 240  
gagccgatat atatgtactg ggtctcctcc gaat 274

<210> 1426  
<211> 438  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-D4

<400> 1426

cacgcggtca acagaacatc caaccgagct aagtaattag gtcgaaaatg acccgtgcca 60  
gcagcagtag cagcagccgg cgtgtgacgc tggtaactgct cggctctccgc ctgctgcttc 120  
tggttggtgt tgcgcaggcg gtagtggagt tgggtgectgc tgatgataat atcgccgccg 180  
ccgctgctgg cacggcggtg gacgatggcg agccgcctca gcagtgcgcg accccggtga 240  
gcgtggagga cgcgtgccgc ggcggtccg agacgcacgc cggcgtggcc taacaccact 300  
gcatggcgtc gctggggccc gatacgcgca tcaatgaagc cggcaacatt aacaatgcac 360  
ggctggcagt tctgggcacc aggatggcca tcgaccatgc cttcagcatc aagtcaaaga 420  
ttaaacacct cctccgag 438

<210> 1427

<211> 364

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-E3

<400> 1427

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accaacttca cgtacaagtg gcagcccaag gaccagatcg gcagcttctt ctacttcccg 120  
tccatcgga tgcagcgggc ggcgggcggg tacggcgcca tcagcgtggt gagccgcctc 180  
ctcatcccg tcccccttga ccagccgccg ccggagagcg accacgcggt gctcatcggc 240  
gactggtaca ccaaggacca cgaggtgctg gcgcgccagc tcgacgccgg caagagcgtg 300  
ggccgccccg cgggcgtgct catcaacggc aagggaacga acgaccctga agccgccg 360  
ccca 364

<210> 1428

<211> 308

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-B4

<400> 1428

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atgggatgcgc tcggagccgg ggacctccat gtcgccgtca tcggaagccg gcgacaacac 120  
 ggtcatcagt aactcaacg atgtccccgg cgcgcgcctt cgcggggcac acgctcgagg 180  
 atgccgcctc ggcggcaggc gccgtccccg cggctctgtc tcgttcggat gctccatagc 240  
 gtatgaaggt cgctcccgt gctggaccct cgggtgctggc ggctcgatgaa gcaggccgcg 300  
 gcgtgccg 308

<210> 1429  
 <211> 314  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-C2

<400> 1429  
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 gtatattcac attaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaag 120  
 ataaaaaaaa agataaggga ggcagctcaa acagataaaa tactagattg agcgaaaatg 180  
 caacttaaat ggcgtcccc tctaggcacg tactgtcaag tccagtcgcc gtcgtttaac 240  
 ctggtacggc cctgagaatc ccttgctgtt cttcaactga ctgctcttgt tagaaacccc 300  
 ctttcgctg gccg 314

<210> 1430  
 <211> 405  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-C3

<400> 1430  
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 gggggcacta aatacctacc acattgcact cagactacat atactgtgtt tgtgtgttgt 120  
 atgccgtatg cgtgtgtgag cttgcgcaaa ttggacatct aggccgtgcg taccctgcga 180  
 tgaaaggcgc cgtcatcggc gcatcgaccg tcctggtcgt ggcggtggtg gccaccatct 240  
 gcgtcgtttc cttcaaaggc agcggcgatg gcgggagggc cgaggagggc gagatgtcca 300  
 cgtcggtaaa gtccatcaag tccttctgcc agcccgtgga ctacaggag acgtgcgaga 360

aggcgtgga ggcggccgcc gggaacgcca ccagccccac ggagc

405

<210> 1431

<211> 310

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-C4

<400> 1431

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gccagtcgat cgttcaagaa cattaccagc ttaccaacat cagcagcatc agtctcacc 120

gttcgatgac atgggtccgcc tcggcgccgg cgccgtgttg gcgctcctag tggcggtcgc 180

tgcggtggcc gcgttcctcg cgggtgccggc ctcgtgcgac gtccggggag ctgaacgcga 240

tggggttgct ggctgagaag ggcggcagca tggcggggcc gcagaagtgc tcgggctctg 300

tgggcgagtg 310

<210> 1432

<211> 307

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-A10

<400> 1432

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atttccgtgg atcatggccg ggttggcatg cctcttgact gctctgggtg gctttgggga 120

tcatecttgc gtagcgcgat ctccagacgc gtcgattcgt cggtcgtcct acgacttggc 180

gcggggattc ttaggacgat cgtgggtagc agatttgtga ccccatctg gcactatgag 240

ctaactctct gcgttacaga tgccagcgta tcgctcgagc tgggtgtgtc cgacatcaga 300

cacgttc 307

<210> 1433

<211> 420

<212> DNA

<213> Zea mays

<223> unsure at all n locations



<223> Clone ID: LIB148-016-Q1-E1-A2

<400> 1433

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gcagcaggcg ggccgcgccg gccgccgcac caccgggtag cccaggccgc gcgcgcgcgc 120  
cgtccagctc gtctgctgtc gctcctccgt gatggccgac gtcgacgtgg acgccaacaa 180  
cgaggccgag caaaggacgc gctcggagcc ggggacctcc atgtcgccgt catcgaggcg 240  
cgacgacgac acggccagca gtacacccaa cgagtccccg gcgcgcgcct tcgcggggca 300  
cacgctcgag gagccgcctc ggccggcgggc gccgtcncgg cggtcncgtc ncgttcggat 360  
gctccagagc gtgtgccggt cgctcccgt gctgaacctg ccgtgcgggc ggccgatgat 420

<210> 1434

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-A4

<400> 1434

attccccgggc cacacccacg cggtcgaaca ggcatacaag cacacatacc tcgcgagcaa 60  
caatgggatc caggatcatc attctacatg caaccacgaa gctggatgca ctgtctgcgg 120  
atgtgttgtg aactagacgg ctcatattcg acgttggcaa cggatggaag catgtacacg 180  
tgcatgacag acaaaccgca gctgccatgg gccatcatcc gcatcagtgt acatgatcgt 240  
gtacctgtag ctgcttgctg acagtggccg tcgccgcgac agtgaacctg gtgcgcgcca 300  
tcggggactt cttcctctca cgcacatgg gcccacatgt cgccatcatc ggcgtcatcg 360  
tcgcccccat cctcgtgatg atcccgatga tcatttaccg gaagcgggac cccgtgaaac 420  
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<210> 1435

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-A5

<400> 1435

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 ctggaggaga cgggggagct tgagaaggag gtgtggggcca ggttctacgg cacgggcttc 180  
 tggaggagcg tgtctcagct cgacgacgac gacagggtgac cggaacaatc aggcccgatg 240  
 gtgagcgagc gatcgaccag ctctccggc gatgcttaag caatagcatg cgtttccttg 300  
 gttgggtttc ctctgttggt tttctgcgga aataagagaa gatcgaggaa aaggaaatgt 360  
 gatgcatggt cgtcgatcga ctatacgagt ttcttttggt ttgcctttt 409

<210> 1436  
 <211> 214  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-A7

<400> 1436

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 tttatgtata gcaaggggtt acaaaagttg gtaatcataa tgcttggtgcc ctgtagtata 180  
 atactattac caccgcaact taatttcttg tttt 214

<210> 1437  
 <211> 250  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-G11

<400> 1437

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 gtgtacagca tggggagctc gatgaccatc gtggcgctct ccctgctccg ccgctccctc 180  
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 gaccaattct 250

<210> 1438

<211> 139  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-015-Q1-E1-G8  
  
 <400> 1438  
  
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 cacacgtcgt attgaaattg ttgagtgctg atgattatct ctctgcgtcc attgcaggca 120  
 cggcatttag caatcgtga 139

<210> 1439  
 <211> 402  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-015-Q1-E1-H4  
  
 <400> 1439  
  
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 gcgtgaagaa gagatctgtg aaccccatct ggcacgagga gctaactctg accgtcacag 120  
 atcccagcct agctctgaag ctggaggtgt tcgacaagga cacgttcagc agggacgacc 180  
 cgatggggga cgcggagatc gacgtggcgc cgctggtgga ggcggcgaac gcgagcccgg 240  
 aggcgagcct gaggaacggc gccatcatcc tgtcgggtgcg gccgagcgcc acgaactgcc 300  
 tcgccgacga gagccacgtg tgctggagga acggcaagtt cgcgcaggac atgatcctcc 360  
 ggctcaagaa cgtggagagc ggggagattc agctgcagct gc 402

<210> 1440  
 <211> 136  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-015-Q1-E1-F12  
  
 <400> 1440  
  
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 tgtcagagac gactctaccc aatatggatc aggaagaaat gtatcagtga tcgcatcgat 120  
 aaacacagtt tgtctg 136

<210> 1441  
 <211> 347  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-C10

<400> 1441

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gcccttttct  gacattcgca  gcgtggacag  gcgttgctgc  gcgaacggct  cctgtcgggg  120
gagtagcttc  ggcgtcagcg  gatcagtcgg  cttctgtgcc  cctgctggga  ggggtctctt  180
caccgacctc  ggcggctacg  tcatccacga  gccgcgtcta  ctgcgacaga  ctgcccgcgc  240
gggtgtcgga  tcacctgtca  ccggaataca  ttctgtcccc  ggcggtgagg  cttacgtgca  300
tgcacttcgg  cttcggtcgg  atcgaccact  ctatcgtcgg  ggtgccc  347
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<210> 1442  
 <211> 445  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-H9

<400> 1442

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ctccccgacc  gccacatcta  ttaggtgcag  ccatgggtgc  ctgtgcaacg  aagcctaaga  120
cgcttgaggg  gaaagcccca  gctgaggcca  ccatctccac  acccaagggt  gcacctgaga  180
ccactaccat  ccacattgag  gttgcggcaa  aacatgcagt  agttgagaag  gtggaggagg  240
acaaggagga  ggcactaaca  gtggcggcga  aacaagagcc  agcagccacc  attgagcctc  300
agcagattgc  tagtgagggt  accacttcgg  aagtggcggt  cgtcgttggt  gagcctgaga  360
acaagagga  ggaggaagtt  gtggagaaga  ccgatcatga  gaaggagaag  ccatcagcag  420
tccatgcaga  ggaaaatatt  gccac  445
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<210> 1443  
 <211> 342  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-B1

<400> 1443

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cttcctcaag aacgggcagc agatcgacaa gctcgtgggc gcgaacaaac ctgagctcga 120  
gaagaaagtg ctagcagccg ctgatgccag tacgtcctag tgacacaagt ggaagtgggc 180  
aaacgatctg tgatggcttc ccggtgtata gtttccatgg ttcattttgtg tgcttgtccc 240  
atgtttgcct ggggacgatg acgttttaca attttggccc ccatcgcgcg cactcgtctg 300  
tttctctcat ggaagccgtg tgaacctgtg cgtgtgtgtg ac 342

<210> 1444

<211> 200

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G12

<400> 1444

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gttcgcctgt ctccgtgtta tctgcaatgc aatcggatgc ttttggttca tcaatatcaa 120  
acccatcaac tgggggcacg tctcctgcgt catcagatga tgggaataat gtccctgaga 180  
tagtgaatgg ggatgaaaat 200

<210> 1445

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G2

<400> 1445

gccgaccac ccgtctaacc aagcgtcctg acaaacgtcg tacgagaacc tttctccctc 60  
ctccaccttt ctctttttct tgccacggca aaacaccttc gccggcgaga gcatggcgat 120  
ggcgtaccgt gtccctggagg tcacctggt gtcggcaaat gacctcaaga aagtgtcgct 180  
cttctcccggt actcgcatct acgccgtggc ttccatctcc ggattcgacc tccgcatccc 240  
ttcccacagc acccaagcag accacagcaa cggctgcaac ccctgctgga acgccgtggt 300

acacttcccc atcccggtg ccgctgacac ccgcgccctc gcactccacg tgaggctccg 360  
cgcccagcgt ctatacctgg gcgatcgca catcggcgag gtgttttgtg cc 412

<210> 1446  
<211> 391  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-014-Q1-E1-G4  
  
<400> 1446

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gaaaaccccg atgaattata taattataaa ggctagtttg acaacttcat tttctcaagt 120  
gaatcctatt ttttcaagag aaaatgaatt aaattccctt gaaaaataa aacctcttag 180  
aaaaataag gttgtgaaac tagccctatt aataaattta tgcagaatgc aacatcggtt 240  
tccaccattt tctcttttac agaatactac tgctccgtgt atacggagaa actacatttc 300  
acggagtagt aaataaacag ggattaatta gcgccgtgtg catgcatgca tacggcggtg 360  
ggctggccga catgatcata acaattaatt a 391

<210> 1447  
<211> 101  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-014-Q1-E1-H10  
  
<400> 1447

attatggtgt gtacattttt ttagtcgata ttcttgttct tgtttgtgtt gtagaaatgg 60  
ttggatatgc taattttcaa tagccttgag ggttcgtggt a 101

<210> 1448  
<211> 386  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-014-Q1-E1-H12  
  
<400> 1448

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ctcgaacccg caccaccg cgcagggcg ggaccggtgg gcgcgcgcgc gccagtanga 120  
 gggagaggaa gggcgccatg gcggcgccgc cggcgaaggc cggggccgac tacgactacc 180  
 ttatcaagct tcttctcatt ggggatagcg gtgttggaag gagttgcctc ctgttgccgt 240  
 tctctgatgg ttccttcact acaagcttta ttaccacaat tggattgac ttttaagatac 300  
 ggacaataga attggatggg aagcgtataa agctacagat ttgggataca gcgggccaag 360  
 aacgcttcgc tactattacc actgcg 386

<210> 1449

<211> 290

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-H2

<400> 1449

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 gcgcaccgcg gcgcagctgc cgctggcggg cggcgccggc ggcgcctga agccggactt 120  
 ctatagccag tcgtgcccgc gcgcggagcg gatcattgcg gaggtgatgc agacgaagca 180  
 gatggcgaac ccgacgactg ccgcgggcct gtcgcgcgtc ttcttccagg actgcttcgt 240  
 cagcgggtgc gacgcgtcgg tgctgatcgc gtccaccag ttccaaaagt 290

<210> 1450

<211> 381

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-H3

<400> 1450

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 gcccaacaaa ccccaaaacc cttaaggggc aggccccacc taaggccgac gtctcaacac 120  
 ccaagggttc gcccgaggcc actccaatct ccgttgaggt tgccgctgat gaacaggtac 180  
 ctgaaaaggt ggtggtggag gagccggctg cggcgccga cgttgagcat cagaaggcta 240  
 atgaggtgct cgctccagag gcggccgctc ccgagccga ccacaaggag gaggaagccg 300

tggagaagac cgctcgtegan gaggagaagc cagcggcagc agcccatgca gaggaaaagg 360  
tcgccaccgc cgccgagacc a 381

<210> 1451  
<211> 385  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-H4

<400> 1451

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cataaccgac aactttcttcg acccaaacaa gtccttgcac tccgtggacc tgtcgacgga 120  
gcacaagatc gtggacctca aggaccggat caaggcctcc gtcgtcatct ggcaccggaa 180  
gatcagcaac aagctctcgt ggggccccgc cggcgtcagc ctggagaagc gggaggagtt 240  
cgaggagcgg gcgcagaccg ccctgtcat cctcaagcac aggttccccg gcatccctca 300  
gtcggcgctc gacatcagca agatccagta caacacggac gtcgggtacg ccatcctgga 360  
gagctactcc aggaccctcg agagc 385

<210> 1452  
<211> 415  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G10

<400> 1452

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cacaagttgc gatggttgtg gcgttgtcct tcttgggtgag cgggtgcatgg tgcggtcctc 120  
ccaaggtcac ccctggcaag agcatcactg ccacctatgg caaggactgg ttagacgcta 180  
aagcaacatg gtatggcaag ccgacgggtg ccggtcccga cgacaatggt ggcgggtgcg 240  
ggtacaagga cgtgaacaag ccccccttca atatcatggg cgcgtgcggc aacatcccca 300  
tcttcaaaga tggtctgggt tgtgggtcct gcttcgagat taagtgcgat aagcctgtgg 360  
agtgtccgga caagcccgtg gtggtgcaca tcacagacat gaactatgag cctat 415

<210> 1453



<211> 382  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-014-Q1-E1-F10  
  
 <400> 1453  
  
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 cctccgccgc cctgtcctcc tcgtcctcgc ttctgcactc acctcctgag agtgatgaga 120  
 caagcggcgg cagcagcag caagccacgc cggaagacga gaacaaggag aacgagcggc 180  
 agctggcgac ggagaatgcg tacgcggagg ataacgtcgt ctaccaggag atgctcaatt 240  
 acgccaatga gaaaggtctg gtgtccccga acaaaggcac ggggtggtac aggggcatcc 300  
 cccgggagtt cgtggacgcc cacaacgagc tccgcgcgcg ctacggcgta ccgcccatga 360  
 agtgggacaa ccagctggct cg 382

<210> 1454  
 <211> 450  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-014-Q1-E1-F11  
  
 <400> 1454

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 cggggggcacc cgccccggc tggccgacct ggcccgtgta cgtgtcggcc gaggtgggca 120  
 tgaccgtggc cgcgttcgcg caccacgagc tcaacgccat caaggacgac gacgtcctgt 180  
 acaagtgcac cgacacctgc tccgaggaca tcgaggaagc cgtggcgcac ctacgcgccc 240  
 tctcccgcga cttctccgac gccaggttcc tcgaggtcaa gtcttggtc acctccacgc 300  
 tcggcggcac cgccacctgc gaggacgcct gcaaggacgc ccccgtcagc gacatcaaga 360  
 acgtctgcac aaccaagagc ttcgagtttg agaagctgct gcgcgtcacg ctggacctca 420  
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<210> 1455  
 <211> 395  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-F12

<400> 1455

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ggcgcagagc agacgcacgt gaaccattgt agctgtccct gtcgtcgtcg tcgtcgtcaa 180  
cgaatccaca caaggaaagg atggagaaga agccgaccat cctcatgaac aggtacgagc 240  
tcggggcgac gtcggggcag ggcaccttcg ccaaggtgta ccacggccgg aacctcgcgt 300  
ccggcgagag cgtggccatc aaggtcatcg acaaggagaa ggtgatgcgc gtcggcatga 360  
ttcgacagat caagcgcgag atctccgtca tgcgc 395

<210> 1456

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-F2

<400> 1456

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agggggggagg ggaaaacacg tacattcacc cggcgggaat aatggcctcg gttccggctc 120  
cggcgacgac gaccgcccgc gtcattcctat gcctatgcgt cgtcctctcc tgtgccgagg 180  
ctgacgaccc gaacctcccc gactacgtca tccacggccg cgtgtactgc gacacctgcc 240  
gcgccggggt cgtgaccaac gtcaccgagt acatcgcggg cgccaagggtg aggctggaat 300  
tcaaagcact tcggcaccgg caagctcgag cgcgccatcg acgggggtcac tgacgcgacc 360  
ggcacctaca cga 373

<210> 1457

<211> 434

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-F3

<400> 1457

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gctgaagatc atggccggcc tgggtcaacct ggacgacctc cagctgggct ctacggagag 180  
gaagctcgtc caggcggtaca acgagaagcc agtcctctcg cggtcccagc acagcttcta 240  
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gaaggggctg gactcgttca gggcacgcct caagaacggc atcctcgatc tgggggttaac 360  
gatccaggcc cagaagcagt cggagctccc tgagcaggtc ctctgctgcg tcaggttgaa 420  
caagatcgat ttca 434

<210> 1458  
<211> 376  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-014-Q1-E1-F4  
<400> 1458

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gggacaggaa atcacgggcc atggcctcaa ttccggcgac aaccttcgcc gtcaccttat 120  
ccgtcctctt ctgtgccgcy gctggaaccg ccgtcgacaa cgacctcccc gactacgtca 180  
tccagggccg cgtctattgc gacacctgcc gcgccgggtt cgtgaccaat gtcaccgagt 240  
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gtccatcga cggggtgacc gacgggaacg gcacgtacac gatcgagctc aaggacagcc 360  
acgaagaaga catctg 376

<210> 1459  
<211> 449  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-014-Q1-E1-F5  
<400> 1459

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gctgctgtcc acggccacgg cgccgggtggc gtcgctggac cgccgcctgg gcctcagcga 120

caagttcagc ctcggcacgg ccgcggcccc cggcgcgggc cgcggcgctc acgagcgctt 180  
ccaggtcacg gagcgcgctt ggggggcctt ctcggcggcc ggggaggtcg tggccggcag 240  
ccccacgcg tcccgcggcg ccgcctgggt gtcggcgggc gtcggcgccg tcgcccgggc 300  
cgcgtccgac gttcgggcca atgacaagga aaaagtgggc aaggcccaag cagaggggga 360  
ggcctcggcg gcgagcatg gtcaactacg gtcgtcccgt gtcgacgtgc acgacggaca 420  
gggacgtgca gtcagcacg gtgaccata 449

<210> 1460

<211> 454

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-F9

<400> 1460

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ctccttggtg cggcgccggc cgccgcgaac gcgcccggcg gggcggttcag caactgggtg 180  
gcgatgaacc agcagagcta cgcgctgtac gcgcagaagt ccgtcgggga cgggggcaag 240  
gagcccctgg acaagaagct gtcggaggcg gagaagaaga aggtcacgta cgtggtggac 300  
cccagcggca agggcgacta caccaacatc accgcggcgc tggaggatat cccggtgagc 360  
aacaccaagc gcgtgatcct ggatctcaag cccggcgctc agttccgcga gaagctgttc 420  
ctgaacatca gcaagccgtt catcacgttc cggt 454

<210> 1461

<211> 312

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D3

<400> 1461

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caacctcgtc acgcccttct ccgacaacaa ttacttgcca aggggctgca acttcgaagg 120  
aaaactcctc cccgcaagca aaaccccaaa aaggacttgt ccgtaaccag gcaagaacaa 180

tcaaaaccac cccgttgagg tgggtgttgac gccggactcc gacgagagct cgccgaagcc 240  
gccgcccgcac gccgaccagg actcgcccgg aggctgcgag tcggggcgcc gcagcacggt 300  
gccgttcaag gt 312

<210> 1462

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D4

<400> 1462

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ggggcgcccg tgcgcgcctg ggtgggtggcg ctggcgctgg tgctggcgctg cgcgctgctc 120  
cagccgcggc cgtccgacgc cggggcgag cctgccccgc attcgccggc gacggcggtg 180  
tcgtcgggcg ccgccaagcc caagtgcgtg gccggcgcca ggaacgacca cgcgtgccgc 240  
ttcgggtccg tgcacgaccc ggacagccag gaggaggagg gctccagcgt cacaatcgac 300  
gccccgccc ccgcgcccga cgacgtcggc cactacgacg gcagcgacta caacgacccc 360  
gacgtgccc acaacgacca gctcgtcgtc gtcggccact gaaa 404

<210> 1463

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D5

<400> 1463

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cttccgctac ataagcgatt tcgcattcaa gatgcaagcg tatagccacg tcgaccggat 120  
caggttcaag tacttctga accctgagag gatccaagat gtcattctgca gaggggaggga 180  
ccttttcgat atgcttccag aagagtacac gttccaagag atcatcgcca agctggggcc 240  
gatcccgagc acgtattctg gcgttcattc tcctagctat ctgctaagga atgtcgaccg 300  
gtttagatac cttctaccgg gcaactgcag gagagaaagt ggctagggtt tatggcccac 360  
taccctgcaa cctgttgtgc gtgggtgggt ggggtgccagt gccacactgc cccgctgca 419

<210> 1464  
 <211> 450  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-014-Q1-E1-D6

<400> 1464

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cggccggtcga cgcacgccta cgaccctcgt ctcaccctcc ctccctcaca caaataataa 60
ggaaagggtcc cgcccttttc ctccgacatc cacagggggg aggggaaaac acgtgcattc 120
acccggcggc aataatggcc tcggttcggg ctccggcgac gacgaccgcc gccgtaatcc 180
tatgcctatg cgtcgtcctc tcctgtgccg cgggtgacga cccaacctc cccgactacg 240
tcattccaggg ccgcgtgtac tgcgacacct gccgcgccgg gttcgtgacc aacgtcaccg 300
agtacatcgc gggcgccaag gtgaggctgg agtgcaggca ctcggcacc ggcaagctcg 360
agcgcgccat cgacggggtc accgacgcga ccggcaccta cacgatcgag ctcaaggaca 420
gccacgagga ggacatctgc cangtggtgc 450
```

<210> 1465  
 <211> 436  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D7

<400> 1465

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gcacgccacc gaaatgagtc agcagctagc tagcgatggc tggagcctgg gcactgctca 60
tcgtcctcgc ggctgccgtc gcggtcctgg ccgcgcggcc ggctgtctga ggcgggggag 120
ccgcggcggt ggcgagatc tgcattgaaga ctccgtcccc cgacctgtgc accaggacgg 180
cggggaagca cgccaacaag tacaaggtgg tggacgcggt gacggtgcta gagatgcagg 240
tggacgcgtt caagaagcgc gtgaaggcgg cgcggaggct cgccaaggag gaggtcaaga 300
cggccgcgac gcccgaggcg cggagggcgc tgaacctctg caagacctac tacctggacg 360
ccgccgacaa cctcggcgcc tgcaagcgcg ccatcggett ccgcgacgcc gttcacatcc 420
gcgccacgat gagcat 436
```

<210> 1466  
 <211> 436  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-014-Q1-E1-D9  
  
 <400> 1466  
  
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 gtgaaggcgg cgggcgtggc cgcgctgctt gtggctgcag tgggtgcgcc tgccgcgcgc 120  
 ggggcggcgg tggcgggtggc gggagggggc cgcgcgggtc cggcgggtcc gctggacatc 180  
 ggcgagctgg gcgccaaggc cgacggcaag tcggacagca ccccgatgat cctcaaggcg 240  
 tggaagaacg cgtgcgaggg gacgggggta cagaagatcg tcatcccgcc gggcaactac 300  
 ctgacgggcg ggctggagct gaagggcccc tgcaagtcct ccatcatcat ccgtctcgac 360  
 ggcaacctgc tcggcaccgg cgacctcagc gcgtaccaa ggaactggat cgagatcgag 420  
 aacgtcgaga acctgt 436

<210> 1467  
 <211> 295  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-014-Q1-E1-E10  
  
 <400> 1467  
  
 cgcgtccgcc cacacgtccg ctctcttctt gatggcgggc gctaccacat attcggcggc 60  
 gcggtgggtg cggaccacgc ggttgtgggt gctgccccgc cggcctgcag ccccgggcgc 120  
 tcgcgggccc gagccccggc ctcggtggcg gcacggacgc agaggctccg gcctagcgca 180  
 agcgcagggc gcacagccgc acccccgaca gcgcgggggc cagtttactc ggcagcccg 240  
 ccgtgagtgc gcggactcct gggcgcacag gcgcaggtac aacctcaage gcaca 295

<210> 1468  
 <211> 445  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-014-Q1-E1-E11  
  
 <400> 1468

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 acaaccctgg gttaaaggag gacggcaagg gccggacacg ccgctggaca acgcggtcct 120  
 cggccggctg aagcagttca cggccatgaa ccagttcaag aaggcggcgc tgcgggtcat 180  
 cgcgggggtgc ctgtcggagg aggagatccg tgggctcaag gagatgttca agagcatgga 240  
 ctccgacagc agcggcacca tcaccgtgga cgagctgcgg agaaggctgg ccaacaaggg 300  
 caccaagctg agcgaggccg aagtccagca gctcatggaa gctgccgacg ccgacgggaa 360  
 cgggacgatc gactacgagg agttcatcac ggcgacgatg cacatgaacc ggatggatcg 420  
 cgacgagcac ctctacaccg cgttc 445

<210> 1469  
 <211> 396  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-014-Q1-E1-E4  
 <400> 1469

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 aacaagccaa ccgaccccggt cccaaggca atccgccgcc gacgtaccac caccaccgca 120  
 ggagcgagat ggagatgaag aggatcctct tcgccgtcct cgtcgtcatc gccgcctcgg 180  
 ccaccgcagt gctggcctcc accgaggccg ccgccgcggg cgcaccaact gcctccgagt 240  
 cgtccgccga ggctcccgtt ggcgctggcg ctggcgctgc cgctggcgcc gccgccgcgg 300  
 ggccctccgc cagcagcggc gcgcccgcgc tcgccgccgc gcccgccgcg ctctctttct 360  
 ccctctcgc ctactacct cactaagcgt gtgcgt 396

<210> 1470  
 <211> 410  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-014-Q1-E1-D2  
 <400> 1470

acaacactct aaagtgagtc gttgtaagga gaagcaatta aaaattcatt cgcaccatgc 60  
 aatgctctac cgacctgaat tgaatgctat cggataaccc catgtacttt tgtccttaag 120



ggtataacac cataggtaat gtaacaattg tttgcacatg taacatgatg accgagaaga 180  
 gaaacatgca aatggagaag gaattgtttc tgcctttcta ggattcttct tagcacaatg 240  
 tgcaaaactt tttcataatg taagagagtt ctggcgctcaa aaaaaaaaaa aaaaaaaaaa 300  
 aaatacataa aaataaagtc tgcattaaaa gaatagacgc cacaacataa cagaagatac 360  
 tcatggcatt cgaagacaac acaaaaaaaaa aaaggggggg ccccccaaaa 410

<210> 1471

<211> 392

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-B9

<400> 1471

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 catggcatca tcggccgcgc tcttgggtgt agccctcgcg ctagtggcgg ccaccgcccc 120  
 acaggtagcg gagggcaaaga agaagagagc ggcggagagc ggcgaggcgg cggaggcgaa 180  
 gaagatccag gacgacttct gctcgacgct gtgcgagggc aagaagggga cggacctggt 240  
 cgtgtgcaag gagtctcgcg cgctctccca gcagtcacac ctggtgctgt acggcaggat 300  
 ccagtgcagg ggcaagtgc cagagcagaa gggcatcacg gcgccggcca tgaaggtctg 360  
 ccaggaggag tgcgacaagg cgtacgtggt ga 392

<210> 1472

<211> 414

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-C1

<400> 1472

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 accaattaca aggacaatgg taattggttc aaaattcaac gcgtggataa cctggccatc 120  
 accggcaagg gaaaccttga cgggcagggc ccagccgtgt ggagcaagaa ctctgcacc 180  
 aagaagtacg actgcaagat ccttcccaac tcgctggtga tggacttcgt gaacaacggg 240

gaggtgtccg gggtcacgct gctcaactcc aagttcttcc acatgaacat tttaccggtg 300  
 caaggacatg ctgatcaaag acgtgaccgt gacggcgccc ggggacagcc ccaacacgga 360  
 tggcatccac atgggcgact catccgggat tcacatcnna caacacgtca ttgg 414

<210> 1473

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C10

<400> 1473

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 gttatcctcc tcttgcatg cattgcaggt cgtagttgag cagcagcaac cactgcacag 120  
 gatgtcgtgg cagacgtacg tcgatgagca cctcatgtgc gagatcgagg gccaccacct 180  
 gagctctgcc gccatagtcg gccacgacgg cgccgttttg gccagagca ccgcattccc 240  
 acagttcaag ccagaggaga tgaccaacat cattaagggc ttcgacgagc ctgggtttct 300  
 ggccccgatc gggctcctcc ttggccccac caagtacatg gtcattccaag gcgagcccg 360  
 cgctgtcatc cgcggaaga agggatctgg aggcataact gtgaagaaga ccggacaggc 420  
 gctggtgatc ggcattctacg 440

<210> 1474

<211> 84

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C12

<400> 1474

cggtccggca tcacgggtgc ccacgcgtc cggttacact tcattggcttc aacgacagca 60  
 ggcatcagac gctgtctccc ctgc 84

<210> 1475

<211> 108

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C3

<400> 1475

cgccctccgc tgcggcaaag tcctggggct gccgctgccg ccgtcctacg cccccgcgcg 60  
ctaagacgac gaaagccttc gtttctcctc gtggtctgac catccaat 108

<210> 1476

<211> 377

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C4

<400> 1476

tccgtgagga ggtggaagga gcaaccctt gggcaggta acacaaagca cctggaaaaa 60  
acggcggaac caaaggtaaa ggtgctggac ctgacgatcc tgtcacctgg cagaccggac 120  
ctgacccctc cgatcccgtt ccaggctgac gagaagggct atgcgtttgc cctcaaggac 180  
ggcagcccct acagcttccg cttctccttc atcgtctcca acaacatcgt gtcaggcctc 240  
aagtacacca aactgtctg gaaaactgga gtcaaagtgg agaccagaa gatgatgctg 300  
gggacgttca gccccagct tgagccctat gtctacgagg gcgaagaaga gaccaccctc 360  
gctggcattt ttgcgac 377

<210> 1477

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C9

<400> 1477

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ccccgtcctc ctcaccgagg cgccccgaa cccaaggct aacagggaga agatgaccca 120  
gatcatgttc gagaccttca acacccccgc tatgtacgtc gccatccagg ccgtgctctc 180  
tctgtatgcc agtggccgta ccacaggtat cgtgctcgac tcgggagatg gtgtgagcca 240  
caccgtcccc atctacgagg gatacgccct cccccagcc atccttcgtc ttgacctggc 300  
cggtcgagac ctcaccgact acctgatgaa gatcctgact gagcgcgga actccttcac 360  
caccaccgct gagcgggaaa tcgtgagga catgaaggag aagctcgccct acatcgccct 420

ggactacgac caggagat

438

<210> 1478

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D1

<400> 1478

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ctaaatggct ccggcaaccg gagggcccct ttggtataat gatctcggta ataaatgcaa 120  
ggccttaggt cacggccatt tccttgatcg attattttcg cggaactatt tatgcagctc 180  
aaaatttata ctactatata tacctacgga aagcaacaat tcaaaccata tactggagtt 240  
tgtttaaggt atcatcgagc agaaatatat tcttgttatt cgtagcatta tatttgtatt 300  
ttattacacg ttttgataat aatcagtaaa catcccggaa ttcggcttca gctcacacat 360  
gtaaaacata gaaaacgttt gtgtgca 387

<210> 1479

<211> 364

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D10

<400> 1479

aagactctag tatgagtcac acataaactt tataaataaa aaaatagaat agtacacat 60  
aacaacatac aacagctttg cctcgatcga gagcatgcat gaatcacagg cgtcgtcgaa 120  
tcaaaagaaa ggaagaaaca aaatgatgtg tgggggtgggg gtttgggtgca tggccgtcgc 180  
tgttaaaatt cgacacacga cagttgcgta aatagacctt gcgtaatcag ctgcacaaac 240  
gaatgagaga gcgagcgagg gaagcaaaat ctgggtgaag agatgaatag atgatgaccg 300  
gaaccccgcg cggcctggca aactgggcct aagcacctgc tccgattcat ctgctctgct 360  
gggc 364

<210> 1480

<211> 436

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-D11

<400> 1480

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gtgctaaccg ttggcgccga tgttcccaaa gccgggcaag ccaaaccctt aaagccttgc 120

cgcccccttg gtaaacaaca accacggaaa gttcacggcc gggccgtgga aaccgcacca 180

cgcaaccttc tacggcnggc gtgacaggtc cggcaccacn gcgggcgcgt gcgggtacaa 240

ggacacgcgc acgcatgggt acggcggtgca gacgggtggc gtgagcactg tgctgttcgg 300

tgacggcgcg gcctgcggag ggtgctacga agtgcggtgc gtggacagcc ctacggggtg 360

caagcccgac gcggcagcgc tgggtggtgac ggtgaccgac ctgtgcccgc ccaaggatca 420

gtggtgcaag ccaccg 436

<210> 1481

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D12

<400> 1481

cacgcgtccg gtacggcgcc cacacgtgg gcttctccca ctgcaaggag ttgcgcgacc 60

gcctctacaa cttccgcagc cagggcgagg agccggagcc gttcgacccc agcatgaacc 120

cgtcctacgc cagggggctg caggacgtgt gcaaggacta cctcaaggac cccaccatcg 180

ccgcgttcaa cgacatcatg actcccggca agttcgacaa catgtacttc gtcaacctgg 240

agcgcggcct cggactgctc agcaccgacg aggagctgtg gacggacccc cgcaccaagc 300

ccctggtgca gctctacgag tccaacccca ctgccttctt caccgaattc ggccgcgcca 360

tggagaagct cagcttggtc ggcgtaaga ccggcgccga cggcgaggtc aggcggcggt 420

gcgac 425

<210> 1482

<211> 448

<212> DNA

<213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-014-Q1-E1-A2

<400> 1482

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gggtccagcc acgcgtccga tcgacatgaa tggacgcaca accgggtatg ttgcgccgcc 60
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tcgtcgttgt cgctgcccc a gtgccgtgcc gtgaagctcc acctgtccat ggagaagtta 180
ttatggcctc gccgcgttga accgggcgcc ggggctcggg aattcttcac cggagaccgc 240
gaacccaactg tcttccgtgg ccagcctctc cgctgactcc ttctctgcgt gaggtcacga 300
gtcacctgat gagcaagttt ggtacctgga atctcaagtc ncaagtcaag aacatgtacc 360
agagaatgag gcgcttggag gatgcggtga tgatttcgtg agtgggtctag gccgtcgtct 420
cncagtcacac tttgggttgc tggaccgt 448
```

<210> 1483  
 <211> 408  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-A4

<400> 1483

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cgggggcagc caagccttcg gtatcacccg attacctggg ggcgggtcct ggttcaaaac 60
aacggaacaa ccaagggcaa ggaaacctgg ttttggacca ggaccaattg caacaattct 120
tacaattcaa ggttggtccc aattacctgg atgaggggtt tgggtccaac tttcaaattc 180
gcaggaacaa cgcggatcag cacaagggtcc ttcaacttca aaacatccaa ttggaaaaac 240
gttctgtttg agacagtgac agtcaaagcc tccggcgaca gctccaacac ggacggcatc 300
cacatcggcg actccaacaa cgttacaatc agcagcatca tcatcggcgt cggcgacgac 360
tgcattctga tcggccccgg gagcaacatg atccgcatcc atggcgtc 408
```

<210> 1484  
 <211> 419  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-014-Q1-E1-A5

<400> 1484

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ctcatccttg ctagtgatgg actctgggat gttgtcacta atgaggaagc tgttgccatg 120  
gtcaagccta ttcaggaccc ccaggaagca gcaaacaagc ttctcgaaga agcgtcccga 180  
aggggaagct ctgataacat caccgttgct atcgccgct tcctatatgg aactaccggt 240  
gataaatcag gcgcagacaa agagaccacc aatgaccaa actcctaatt acctcctggt 300  
aggattcctc atgcgtgtgt tttcttctgg ctggtgtatc tgatgctcaa agtanatgct 360  
ccgtgtgtct tccgctgctg ttccggcaag aaactgaatc ccccgaccgt cgtcgtgat 419

<210> 1485

<211> 354

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-A6

<400> 1485

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gatgtgctcg agagctccct taaattcgtc atcattggta ctgatggagt ctgagatggt 120  
gtcactaatt aggagtctgt ttgcacggtc aacctattc atgagccgca ggatgtatta 180  
ctgaagcttc tcaaagaagc gtcaccattg ggagcctctg aacagatcac cgttgtacat 240  
cgtcggcgct ctatatcgag ctacgggtca gtactgaagc tgaaattctg agacgaccag 300  
tgatcagtgc tccaaagtag ttgcagctcg gattgctcat gcattctgtt tctt 354

<210> 1486

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-A8

<400> 1486

attcggccgt cgaccacgc gaccgaggac gcgtgggata gcatgcgccg tccttttata 60  
ttctattcca gcatggccag ttcattaccg gcaagggaaa ccttgacggg caaggcccag 120  
ctgtgtggac caggagggcc tgcaccatta actacgactg catgatcctt cccaactcgc 180

tggtgatgga cttcgtgaac aacggggaag tgtccgggggt cacgctgctc aactccaagt 240  
tcttccacat gaacatgtac cgggtgcaagg acatgctgat caacgacgtg accgtgacag 300  
cgccccgggga cagccccaac acgggatggca tccacatggt cgactcatcc gggatcacca 360  
tcaccaaacac cgtcattggc gtcagcgacc actgcatctc catcggcccc cggac 415

<210> 1487  
<211> 453  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-B11

<400> 1487

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cgggggcgggc tcaacaaccc ttctgaaaaa ttaaaacttc tccttgaggc ctgagcccct 120  
cgccgcgggtg agccaagccg gcgcacgtcg ccccggggct cacgctcacc acgagcccaa 180  
ccaattaata atatatatat atagctagga tcgatcgtca gtaacatggc aggtccgcc 240  
gtcctgaaga gccccctgtc agtcctcgtc tacatcctcg ccgccgtgcc cgccaacgcc 300  
gcggcgacgc cgaccgacgc cgccatcgac gaggcgtacg cgcattctgt caacctcacc 360  
gctaaccagg agtactgggc ggagcgcgcg gaggcggcgc acgcgtacaa ccgcgcggcg 420  
taccagaccg acccgtggg cgtcgtgcag cgc 453

<210> 1488  
<211> 412  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-B4

<400> 1488

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catcattgcg gaggtcgtca tccccgcac cgcacatcga gacaagtgcg ccgcctgcaa 120  
ggccgttgct gcggagctgg agattggaat ttcgagtgcg aagccgagaa atcacttggc 180  
cttgcgcaac cgcttaaatt ctaaaggcca gagggagggg aaggtcatcg attatagggt 240



cagtgaagctt cgggttgtgg aacttctgga tggcctatgc gataagatgc aagattatac 300  
 cttaaagaag ttggaatcag gcgaaaaggg atgggttaaa gtaacagact ggaatagctt 360  
 tcaaactgaa aataaggcag cagcaagagc gcactccana aaactgtcca cc 412

<210> 1489

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-B5

<400> 1489

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 aacgatgcaa acaacagtag cagcaacacg gcgtgtgacg ctggtaactg ctcggtctcc 120  
 gcatgctggg ttctgggttg tgttgcctaa gcggtatttg gagttgggtgc ctgctgatga 180  
 aaaatatccc ggctgccgcy gatggcacgg ccgtggacga tggttaaccg cctcagcatt 240  
 gggcaacccc ggtgagcttg catgaggctt gccgcggcgc atccgagatg cacaccagc 300  
 gtggcctacg acaactgcat ggcgtcgtcg ggcgcgcacc cgcacatcac ggaggccggc 360  
 agcaataaca tgcacgggct ggcggtgctg gccaccagga tgg 403

<210> 1490

<211> 432

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-B7

<400> 1490

acccacgcga ccgaggacgc gtgggttgtg atgtcccgat ggttgaagag gccatacacg 60  
 ccatctgcaa gagccacgga acaccaccag atgagaagat tgccatcacc aaagctatta 120  
 taggggtatc gaatggatcc aagccccac tctttgctgg catcatagca cttgtgatga 180  
 gcatcgcaac gatggtccgt ctgaccgcga gcatgatgcc tgggaagggt ctcggtgctg 240  
 ccataggttg agctaccctc tcagaaggta aatcaaaagt acaagagcgc cagcgggtcca 300  
 agctatcaga agaggctgtg gaggaagctg aagacgccgt ctctgcaaag cgcctctcgg 360  
 agcttgagga gaaggtcatt gcactcctga caaaaccgc atcaatgcct gctgataagg 420

angaggttct gc

432

<210> 1491

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-A10

<400> 1491

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cgtcgccggc ggccggcagc ccaacgagcc ggccggcgggg aggccgccga agctgtcgat 180  
ggagacgttc tcggggatga tcaagaggcc gttcgccaag ttctgagcc cggtgatcaa 240  
gggcgtgtgc gccaaacgag agtaccggga ggactgcgag tcgtcgatcg ggggcctccc 300  
gggggccgag tcggcgccgg ccacggacag cgtgggcgtg ctgaagctgg ccatggaggc 360  
ggtgcggcag aaggccatcg aggcgatgaa cgcgccacg gacaggatga acgcgccggg 420  
cacggacccg acgacc 436

<210> 1492

<211> 340

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-H1

<400> 1492

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tgaatcatca gagctaggcg ctgtacgcgc acaagtcctt cggggacggg ggcaaggagc 180  
ccctggacaa gaagctgtcg gacgcggaga ataagaaggt cacgtacgtt gtggacccca 240  
gcccgaatgg cgactacacc aagatcaccg ccgggctgga ggatatcccg gtgaccaaca 300  
ccaagcccct gattctggat gtcaagccct gcgctcagtt 340

<210> 1493

<211> 313

<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-H10

<400> 1493

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 accatcggtg cgtccccctt gtcctcctc gccctcctcc tcttggtttt cgcggccacc 180  
 gccgaggccc gcgttggtccc cgagctgttt ggcgaggacc aattccagcg gacatgcaac 240  
 caggtgcact tcaggaagat gtgccagagc ttgacgaggc tcccgagggt gaccacgccg 300  
 cgcgaactgc tgc 313

<210> 1494  
 <211> 396  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-H12

<400> 1494

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 cccttgagga caggaaccac ctcaactgaa ccgagtgcgg ctttcaccaa cagatacat 180  
 agctcggcac tagtgccatc tcatgttagc aagtgtgcat gtgcccacac cctaaggtca 240  
 gaatttatat aagcatgcta tgtgtgggct agtgatggta atttagtctc ttcataaaga 300  
 ttgaatgctg taccgggagc gtacgtacat attactacc agcctgctgt tcattgtttg 360  
 atatcacctg ggattcacga gactgctggc actgat 396

<210> 1495  
 <211> 458  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-H2

<400> 1495

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acggcgggccg ccccaatcgg ggacccgcag caacaacggg gcgttcccgg gggaaagcga 120  
acgcgacggc gtccccgtga tgggggtccac cgatatccgg atcgagcacc tgtccatgag 180  
cagctgcgcg gacgggctgg tggacgcggg ggacggctcc accgccatca ccgtctccaa 240  
cggccacttc acgagggcacg accacgttat gctgttcggg gccagcgacg ccgcgtccaa 300  
ggacagggag atgcaggtca ccgtcgcctt caaccacttc ggcaaggggc tgggtgcagcg 360  
gatgccgcgc tgccgtcacg gcttcttcca cgtggtgaac aacgactaca cgcactggct 420  
catgtacgcc atcggcggca gccggaaccc caccatca 458

<210> 1496  
<211> 413  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-013-Q1-E1-H4  
<400> 1496

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ggacggcggc gcgaccacgg tgcactgctg gcgcttcccg ccgagcgccg acgacggcgg 180  
cggcgaggac gcccgccccg tcttggtgct cctgcaaggc tttgggcccc cggcgacgtg 240  
gcagtggcgg cgccaggtgg gcccgctctc gcgcgggttc cggtcatcg tcccggacct 300  
gctcttcttc ggccggtcgt ccacgtcgtc ggccgccggc gtctccgagg ccancaggc 360  
ggaggcngtg gcgaaggctg tggcggctgt ggccgccggc ccggcgcgcg tgt 413

<210> 1497  
<211> 434  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-013-Q1-E1-H6  
<400> 1497

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gcgatcaagg caacagggcg gtgcaacctg ttcctcgtcg gacagggcac gccctgcatg 180  
 ccgctgggtg actggagcac ggacagcccg gagctcgggc cggtggttac ttacctggcg 240  
 ctgccggaat tctcgacggt ggcatctgtg ctggtcatga aacagtacga tccgatggcg 300  
 aagcacgacg acttcgtcga ggaggtggcc gacatagcgg tggacgttga cacgccgggc 360  
 cccagtaacc ggggaaacaa tactagcttc catgccggat gatacgtgct ggtgttagat 420  
 gtattattaa catg 434

<210> 1498  
 <211> 443  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-013-Q1-E1-H8

<400> 1498  
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 gatctgaagg cgcggcggag cttccggttc atcgtgttca ggatcgacga caaggacatg 180  
 gagatcaagg tggaccgcct cggcgagccg aaccagggct acggcgactt caccgacagc 240  
 ctccccgccg acgagtgccg ctacgccatc tacgacctcg acttcaccac cgtcgagaac 300  
 tgccagaaga gcaagatctt cttcttctcc tgggtccctg atactgcacg caccgggagc 360  
 aagatgctgt acgccagctc caaggacagg ttcangangg agctggacgg catccagtgc 420  
 gagatccagg ccaccgaccc caa 443

<210> 1499  
 <211> 361  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-013-Q1-E1-H9

<400> 1499  
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cttccctcgt ctatctcgtc ctgcctccgc cccgccgtag ttagctgctg cgcgctcgcc 180  
 accatggcca gtgccggctc cctgcaacgc agaccgcgtg ggggctgggc gcatgtgtgt 240  
 tcttgctcct agccgccgat gcccgctccg gcgagcagca gccccaccgc gcgtcnctgg 300  
 cgccactggc cgtggtagca gccatggcat tgctctgcgc gcccttgac ctggccaaaa 360  
 a 361

<210> 1500  
 <211> 387  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-F2

<400> 1500

gggtcgagca cgcgtccgag cgcaatctgg ctggttcttg tgatctatct agccgtttct 60  
 tgagtcagt ctggaaagtc aaactggttg aggaaacctc aacgggggtgc ttcaacaaac 120  
 gcgaaagtgt cgctgtcatt tagcgcgtcc tgaatggatt tgacctgatg ggctgatgg 180  
 ctgttgctct tgatttgagc tcgaaggatg atgaaatggg gggctcaaca tcagcactcc 240  
 cgcggtattcc tactacgacg taccgtcata ttgactgac ggtgtacca agagcaagtt 300  
 caagatcaag gctggcaaga cattaactgc tcggaaatgg taggctgcat ttagtcgcaa 360  
 tggctgtctt gatattgcct cagtcct 387

<210> 1501  
 <211> 367  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-F6

<400> 1501

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 ggcaagccga ccgccgacgt accaccgcgc caacccgaga gaaagagggg gaggatcatg 120  
 acgatcctca actccgcgt cctcgtagtc gccgtctcgg tcatcgagc gctggacccc 180  
 aacgatgctg ccgtcgccgg tgaccaagac gactccgact catccgtatc agcaggtacc 240  
 cgtcacaggt gcaccgaggg gtctgccgca agaacaggtt caggatcagg gctggcagca 300

cactatgtcc tccaaactct cacgctggat ttagtcgcga tcgtcgtctt gctattggct 360  
cagttcc 367

<210> 1502  
<211> 383  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-G10

<400> 1502

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tgtgctgtgc ccttcttgtg ctgctcatcg tcgcctccag cgcaacgggt tcgactgctc 120  
atgacgagag ctgctggaag gacgacgacc accaccctat ctgctttccc gaagactgcg 180  
tggcgacctg ccaggatcac ggccacgcgg acggccgctg caactgggca tggtcgtgga 240  
ggccgtattg ccagtgcctg ttggcggact gccaataggc gcgaacagct gcgtcgcgatg 300  
gcgtcctggc tgccctgccg gccgatgaag gatgaacggg tgccggccgat gatcgatgtg 360  
tccgtcggca tgctgatcac tca 383

<210> 1503  
<211> 391  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-G12

<400> 1503

gaccgacccg tcagctcgcg gttcatgacc cagaaaccgg cgtcggcgat agtgtcaaag 60  
ctggagcaga tcgctgagac agagcgcttc atggtgaaga aacaggacgg gctgggtgaag 120  
ctgcaggggt ccaagcaagg gaggaagggg cagctcgcga tcgacgccga gatcttcgag 180  
gtgacaccgg cctttcacgt cgtcgagggt aagaagtcgg caggcgacac gctggagtat 240  
gagatgttct gcagcaaggg cctaagacct tcaactcagc acatctgctg gagcagccga 300  
tctgaggaga acatggctcc ttcagtgggt cagccatcac aattggagcc atcctcttag 360  
accgtctccg acagtttact caccctctt a 391

<210> 1504

<211> 447  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-G3

<400> 1504

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cgaaaaagct taccctgtgt ctgtctgtcc gaccgtcagt ccgtctaaca atcgattttcc 120  
atgacgacgt ccccgcgctg gtggctgctc gccatggcac tggcgctcgc ctgctgtctg 180  
ctcgtgaggt ccgccgacgc tgctgccgag gcgtccccga ctccaggcgg ctccacctac 240  
gggtgcaacc cggccacgga caagtcgtgc aagcccagg gcgtgggggt ggtgctgccg 300  
ggcggcggca tcgacctcga cggcgacggt gacgaggacg agctgccgca attccagccc 360  
cacctcatga tcctcggcca tggccactga tgagtgtaaa tggttgggtg gttggtcgtc 420  
ctcagccgat ctactgtacg acacgat 447

<210> 1505  
<211> 357  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-G4

<400> 1505

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ttggaaagtc actcgtgacg ggatgaaacc tctcaagaat cccgaaaaac ccacacgagt 120  
gaggaaaaag aaattcattt aaatgctaga gccaaaaatt gcttgtatga atctctcagc 180  
atggatatatt ttaatcaagt atttaccttg agaactgcta atgaagaagc taatttattt 240  
aattaataaa gatgaataaa acgaagatac aaccagttgc acttcaggaa gatgtgccat 300  
aacttgacaa gggtcccgaa ggtgaccaca caaaaaaaaaa ggggggggccg cctcaaa 357

<210> 1506  
<211> 412  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-F12



<400> 1506

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tccggcaaca agatcagcgt ggccttgctg agcgtggccc tagtgggcct gctcctctgc 120

cacctcgcca ccaccgcctc cgcccaccag aaagacatcc acgtcctcgg cagcgtcgac 180

ggctccagcg acggcagcag ccccgagtcc gaaggccgcg tcgtctacgc ggacatgaag 240

ctggctgata cggaatccga tgcgccggcg ccggcgccgg cgccggggcc gtcgtccggt 300

tgaactgaga agcgtgctc cagccaagca aggtgggtcaa aaccgagaac taattaagg 360

ctcgatcgtg tgtcaggcta ctactgttct tgccataatt atatatagat ac 412

<210> 1507

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D9

<400> 1507

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ttcctccctg gcatggagga agtagctgtt tcgcctatga tcgttgccgc cgtagtgctg 120

gacaacaatg gcgctgacgc ggtctcctgc actgccatcc ctagcgtaac aataagccta 180

gaggagaaag aaaatatcaa tggggatgtt cccacgatca cctcggccgc aagcaacgag 240

gaggaggcgt tgttcagtgt cagagaatcc accaatgacg atggccatcg cttgacgatg 300

gaatgtcca ctccgtctc ctccagtagc cttccactc gcaagaagcg cggggcgttc 360

agcctettca aggcgatgtt cctgtccttc ggccggagcc acgac 405

<210> 1508

<211> 282

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-E11

<400> 1508

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ggggttacgg cggtgcaacc ggcaaggett cctcaggcgg cggcgggctg gaccccgacg 180  
gcgaccacaga ggttgggctg aacgggaagg cgatcgagga gatcgtgaac gagcacaacg 240  
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<210> 1509

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-E2

<400> 1509

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ctgcgagtca ctgacgttcc ggggatgac cagcgaccac cgcaaggcca cctcatggca 180  
cgттtcccc gctgactgga agttcggcgt cacgtaccag gcgtccaaga acttctaagt 240  
agccactttc cctcctcttc ttcaacctgc atgccagcaa gcagccatac ggatgataac 300  
atgcatcatg catgcatatt cattctttcg ctcatgcact ccgatacggg gccggagtta 360  
aaaaaaaaatg taaatcaatg tgcaaattca aatgacatcc taaccagttg tgatcaa 417

<210> 1510

<211> 400

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-E3

<400> 1510

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caacaacctt cgccgtcatc taaccctgct tcttctgtgc cgcggtggc accgccgtcg 180  
acaacgacct ccccgactac gtcattccagg gccgcgtcta ttgcgacacc tgccgcgccg 240  
ggttcgtgac caatgtcacc gattacatcg cgggcgcca ggtgaggctg gattgcaagc 300  
acttcggcac cggcaagctc gagcgtcca tcgacggggg gaccgacggg aacggcacgt 360  
acacgatcga gctcaaggac agccacgaag aggacatctg 400

<210> 1511  
 <211> 370  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-013-Q1-E1-E4

<400> 1511

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tcgcagtaaa cggggcggtt cccctacagt ttcaaagctg agatcacctg caaggcaact  180
caagaccctt tcaataagca tcacaaacat caattcatcg ccttgcatth aaaaaatcct  240
gaccagggaa acacccttgc gtctccact ttaacgtgct gtcagaaaac ccccttttcg  300
caaccgggga taactcatac atggcccacc aggtttcccc tcccaaaagc ttgtacaccg  360
taaaggtcaa                                     370
  
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<210> 1512  
 <211> 267  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-E8

<400> 1512

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gcttgggagg caatctcaga agacattcag gcctaagaac gatgcaccgt ctggcaacaa  180
ggctgtgcac ctgacgaatc acattcgtct aaccttatga agccggactt tgaggtatgc  240
tgtccggttg ccaccagggg acgatct                                     267
  
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<210> 1513  
 <211> 363  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-F1

<400> 1513

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 aaagcgactc tgagcgggtga ccggagtgat tacgccatcc catttggaga agaacadgtg 180  
 gtccaagtgg agccacatat caaggagtgc gatttgatct aggtggcgtc tcccagttga 240  
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 att 363

<210> 1514  
 <211> 330  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-013-Q1-E1-F11  
 <400> 1514

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 gcgctccttg gtgcggcgcc ggccgccgcg aacgcccccg gccggggcgtt cagcaactgg 180  
 gtggcgatga accagcagag ctacgcgctg tacgcgcaga aatccgctcg ggaacggggc 240  
 aaggagcccc tggacaagaa gctgtcngag gccgagaaga agaaggtcac gtacgtgggtg 300  
 gaccccagcg ggcaagggca ctacaccaac 330

<210> 1515  
 <211> 337  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-013-Q1-E1-C6  
 <400> 1515

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 ggcccagcgc gctgatgcca atgccacctc cagcgtctcc gatctaggcg gatcagctag 180

cggtggcgcc gctgcgcttg tggcgctgga tgaccatctc gatgtcagat tgtcaattgc 240  
gtccccgttat ctgatcatga acccttgact gggcatgacc atcgtcgact agttcatcca 300  
tcttcaggga ctatctcatt gttcagcacc attccct 337

<210> 1516

<211> 372

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-C9

<400> 1516

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ttcaccatca ccaacaactg cggctcgacg gtgtggcgcg cgccacccc ggtggcgcg 180  
ggcacgcagc ttgaccccg gcagacgtgg accgtggacg tgccggcggg gaccagttcc 240  
ggcaggggtgt gggggcgcac ggggtgctcc ttcaacggcg gcagcgggag ctgccagacy 300  
ggcgactgog gcggcgact ctctgcacg ctctcggggc agcctcccat gacgtggcc 360  
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<210> 1517

<211> 405

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-013-Q1-E1-D11

<400> 1517

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ccgactgggt ggacctggac gaaggaggac gagaggctcg ctcgctcgctg gcggttggtg 180  
cgtgcgcgcy cgatggacag gggaacgggtg gaggacctca tacggcggtt gctggacggg 240  
aagaagcaca aggcgacggg gaagaagggtg cagctgaccg agaccgagat ccggcacctc 300  
tgcgtcaccg ccaaggagat cttcctctcc cagcccaacc tcctcgagct ggtggcccc 360  
atcaacgtct gcggtgacat ccacgggcag ttctcggaacc tgctg 405

<210> 1518  
 <211> 456  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D2

<400> 1518

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acgattgcaa gcctgccgat gacgagtcaa cgtcgtggaa gcgcctcgtg gacggtatgc   180
gcccgctccg cctccgcggg cagctggagt actaccgcc gccaccgcc ccaccgccgc   240
tgggccacgc cgatgtgtac catgacgtga tcctccgcc gccgtcgag gcacggttcg   300
gcttcgagat caaggaggtg ggcattacca gccgtacgc gtccgtgag gatctgcacc   360
agatggacag cgaccaggaa aaaggggtgct gaggtggcg atgacggtga cagcagttgc   420
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<210> 1519  
 <211> 353  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D3

<400> 1519

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tcacgagaa gatcatggac cccaagctcg ccggcacctg caaccggag tcgctcgcca   180
agttcgccga gaccgccgag aagtgcctcg ccgagttcgg cagcgaccgc atctccatgg   240
gcgacgtgct gtggaacctc gactacgcgc tgcagctgca ggacgccaac ccgccgatg   300
gcgcgcggca tggcggcgac ggggacgacc aggacggcgc cgcgcgggcg ggc          353
  
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<210> 1520  
 <211> 429  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D4

<400> 1520

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cgcgcggtg gagccaccgg cgaagagcta cgtgatcgac gtgaaaccgg gcgtgaagtg 180  
catcggttg caggagggcg agtggcccgg cgtgtcggtc atcggcaaca tcatgcagca 240  
agagcacctc tgggaattcg acctcaagaa catggaggtc aggttcatgc agtcgacctg 300  
caccgggtga tcgtaaagct gacctcgatg gttttgttca gagcattcca aggggaaatg 360  
ttttttctga acataaaaaa atagaaaacg aaaatgatgc tctgcataaa tcaactttct 420  
gcacgagat 429

<210> 1521

<211> 454

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-013-Q1-E1-B1

<400> 1521

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gtgaactgac aagggcccca agcaagctgt cgtctgcatt ttctggtacc caggataagt 180  
gcgcagcatg ccagaaaaca gtgtaccgcg tggagaagtt aactctggaa ggcgagtcct 240  
accacaagag ctgcttcaag tgctcgacg gcggctgcat cctgaccacc tcctcttatg 300  
ccgcgtcaa cggcgtcttg tactgcaaga tccacttcgc gcagctgttc atggagaagg 360  
ggagcttaca ccacatgaac aagaagagcc cgtcncagga ggttctgccg gacgtggctg 420  
acgaggagca accgccggaa ccagcgccac cgca 454

<210> 1522

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B10

<400> 1522

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tggaaaggct gggcgactac ctgcttgaac agggcatgta actactacgt accagctgga 120  
atgcatgtcg acgacgatgg tttcgagttt cgacttccaa taatagtaac aacaaagcaa 180  
aggccttcct cccggcgat ttgctttggc tcttctctc cagccataa gatattctagc 240  
aattggtgac tcgccttaat tagttcgctt tgcttttgag gttgactcga ccattttgct 300  
gtaacgtgaa ttgcatggac atgcaacgct ccaatggcct ttggaatgtg gaattttttt 360  
cccgtttctg taattttcct ataaaatgaa gtaatgaact ggttcttata t 411

<210> 1523

<211> 377

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-013-Q1-E1-B11

<400> 1523

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tacaatgtct tgccactcat cncgatctgt aaacanatga tcaatgatcg tgcggccgat 180  
ccgttccttc atttgggtgga tgagagcaga cttacagctg ttaaggattc ttcaaatgat 240  
ccttcaaaaa tatatggatt cacagaggac aacaataatg cactgaagtc cttttcagaa 300  
atagaactat cagaaagtca atctcgagaa tgcatagtct ccacaatcat gaacaacatc 360  
gcaaatatgc tggatgc 377

<210> 1524

<211> 379

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B3

<400> 1524

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ataatcagcc acctgaagaa aaaaatgcct gcactgatgg gcaaggccaa ggcccagcaa 120  
aagctgctcg acgggctgga tcaaaagtcc gccaaaggctc agaaggagct gcacctgccg 180  
ccaggggact tcccagagcgt ggaggagtac agggagctcc tgagcgccta caacttcgac 240  
aggttcgaga agctgaggcc caagatggtc cagggcgtgg acgacatgct ggcctacgac 300  
atcccggaacc tctgaagaa attcaagaac ccctacaact gaagccggaa accaatctct 360  
ttgctcctcg gggaagggt 379

<210> 1525  
<211> 352  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B4

<400> 1525

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cccggctcca cagccgcgcc attcgagctg ctgctcgcgc gcggctgggt cttctcgggg 120  
ggattttctt tttgcgggca ccctccgctc cccctcaccg ccttgccgct agccgtctcg 180  
tttctggatt cgtttgctcc ggcggtggcc gacctgccgt gcggggcgcg gtgatgccg 240  
agggtggggca gtacgggtac aagaagaccg acggcatctg cgacagcgtg tcgggcgagc 300  
ctgtgttcac gacagctctg acgatgtcaa ggctacagtg cgctctccgg gg 352

<210> 1526  
<211> 372  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B9

<400> 1526

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cgcgcgcgcg tggtcggagg ctgccgtcgc tcgctcggc cgccccgcc ggccagcgag 120  
agcgagggac aacgaccgac cgaccgacca gctcgaggtg aatgaacagc cgcataccgt 180  
tcctccagaa aatgcaccgc tggatcatcc ctagctgcgg cgacaccgc cagccgcgcc 240  
cttctctccg ccatcgagat gcgttcccga ggccggcgctc ggcgtcggcg tcggcgctcg 300

cggccccgtc ccctcagaag ctgaggaagg tggggtcgga ggggacgctg gtgctgtccg 360  
tgcccaagga cg 372

<210> 1527  
<211> 410  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-C11

<400> 1527

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tcggcctcct cgtegccgcg gctccctcgc ccgtcgcgct ctccgatggc ggcgggatgg 120  
cggcgccggg gtacgggtac gcggcgggga gcccacacgc gccggagaac tgggggaagc 180  
tgagccccgc gtacaagctg tgccgggagg ggaagcagca gtcgccgacg gacatcgctca 240  
ccaagcaggc cgtccccgcc gccaccctcg acaccctcaa ccgcacctac ggcgccacca 300  
acgccacgct catcaacgac ggccacgaca tcacgctggc gtcgagggc aaggttggga 360  
cggtgacggt gaacggcaag gcgtacagct tcgagaagct gcactggcac 410

<210> 1528  
<211> 381  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-C12

<400> 1528

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gcgggtggcca cgatgacgac taataagccc ctctctctcc tcgccctggc gtccgcgctc 120  
cttgggtgcgg cgccggccgc cgcgaacgcg cccggcgggg cgttcagcaa ctgggtggcg 180  
atgaaccatc agagctacgc gctgtacgcg cagaagtcgg tcagggacgg gggcaaggag 240  
cccctggaca agaagctgtc ggaggcggag aagaagaacg tcacgtacgt ggtggacccc 300  
agcggaagg gcgactacac caacatcacc gcggcgctgg aggatatctc ggtgagcaac 360  
accaagcgcg tgatcctgga t 381

<210> 1529  
 <211> 306  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-012-Q1-E1-H2  
  
 <400> 1529  
  
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 tccaaccgga gattcggcgg cgcctaacc ggtaaccgtt gcaaccttgg ttgcgggggt 120  
 cccaaaaaac ccaaaatttg gtggtggctt cggaggaatt ttggaaggaa ttggaaatgc 180  
 caaaaccgga actgttgccg gcgttccaat tggaggatcc tccggtggcg ccgatgctgg 240  
 cgctggcgct accgtangtg ctggtgtctc gggaagcgct aaagttggtg gtggcgttgg 300  
 aggaaa 306

<210> 1530  
 <211> 324  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-012-Q1-E1-H3  
  
 <400> 1530  
  
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 aggctaaaca aatacggagc tacccttcag aaaaaaaaaag aaaagaaaga aattgaaaac 120  
 cagggaaaaa aaatggaact ggcccattga ggaagcttga aaaccattta acaagaattg 180  
 ccaacatata cttggacaac cttgttaaca aagtttaaag gtttccaagc aaaaaaac 240  
 gcttgcaacc acaacattca tataattaat aagcaagggt tagaaaagag gcaacatggg 300  
 caciaagatg aagaagggat tctg 324

<210> 1531  
 <211> 397  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-012-Q1-E1-H4  
  
 <400> 1531

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 acccggcggc ggcgatcgat ggctccgcgc agtcacatcg cggcgacgtg cctgtgcctc 120  
 gctctcgccg cggccacgct ggcgctggcc cacggggcgc aaggaggagg accatcggca 180  
 tcggcgcgcg acctggacaa ggtcacggcc gagaccttct tggccatcga gatcgacggc 240  
 aagcctgcag gccgggttcgt gctgggactg tttggggaca ccgttcctaa aacagcagag 300  
 aacttccgag cactttgcac aggggagaaa ggaattgcc agtccggcaa gcctctgtgg 360  
 tacaaggggt cgacgttcca caggatcatc ccgggggt 397

<210> 1532  
 <211> 293  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-H8

<400> 1532  
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 tgtcaactgg gaagcgggac cctcgacaac ggggccaag taagctttag agctgaaact 180  
 actttaagcc tacctatgct aactatacta gattgcgttg gcttccatat agtgcattat 240  
 acatgcatgc atttggccct gatatcgatt tgcgaccact tacctaatac aac 293

<210> 1533  
 <211> 388  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-A10

<400> 1533  
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 gttcacaatc tgatgcagct acaatcataa aagcgggtca ttcaaaagg gcaatctaca 180  
 ttaggcctgg ggaaataatc ccgaattacc tgaaaccact agcaccaaaa ccactttcct 240  
 cggtaccacc gatgaaccca gggcagctca gacgatttgg tgattctgct gtcaccaagg 300

atgcaatctt cggttcttcg gatggcacgg acgatgacga cgaagaagac actgatgacg 360  
 aggaagacga cgagctgact gacaacga 388

<210> 1534  
 <211> 329  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-A11

<400> 1534

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 caagggcaag gtgcatggcg gctgtgccgt caaccgcgtg gttgctggca tctgctctcg 120  
 cgccccattc ccagaggttt gcactgccac agccggggcg catgcatcca cttaccgggt 180  
 catcgaccat ttggccgtgc tgaacatgca agtggccgcg ttcgccaaagc gcacatcgca 240  
 tgcgcggaaa cacgtcgcg tggcgggccc cactattcca ccgcgcgaag cacagggcct 300  
 cacaacctgc gacacgatgt acatgaaca 329

<210> 1535  
 <211> 362  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-A12

<400> 1535

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 gcgctagtgg ctgccaccgc cccacaggta gcggaggcaa agaagaagag agcggcggag 180  
 agcggcgagg cggcggatgc gaagaagatc caggacgact tctgctcgac gctgtgcgag 240  
 ggcaagaagg ggacggacct ggtcgtgtgc aaggagtect gcgcgctctc ccagcagtc 300  
 aacctggtgc tgtacggcag gattcagtgc aaggggcaat gcaccgagca gaagggcatc 360  
 ac 362

<210> 1536  
 <211> 341  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-A2

<400> 1536

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cgggggcgag cgcttcgct ggccccaagt cctcttccat gcctccttca tcgggctgga 180

agctgccggc atccaccata ccacctacaa ctccatcatg aggtgcgacg tggatattac 240

gaaggacctg ttcggcaaca tcgtcctctc cgggtggcacc accatgttcc ctgggatcgc 300

tgacaggatg agcaaggaga tctctgcctt ggctcccagc a 341

<210> 1537

<211> 329

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-A3

<400> 1537

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gattacttga ggacaaattt aaggtcggta agaaactgcg gggaatggac attgcaagat 120

gtggtgtggt ataagatagg caaaatgtgt gattatTTTT tgtccgaggt tatcaccccc 180

cttggcccag acaagatgat aagatgtcaa tgtaacaagc cgtctgagct tctgtaagta 240

aatgactgtt gctgcatgcc ccctgtgtac atgtagctgt ttgagcagaa ttccgtttgc 300

atgaatcgtg tgatcaccag ccagggatc 329

<210> 1538

<211> 308

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-A4

<400> 1538

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tggcgagcgc ttccgctgcc ctgaggtcct cttegagcca tccttcatca ggatggaacc 180  
 tgccggcatc cagcacacca cctacaactc catcatgaag tgcgacgtgg atattacgaa 240  
 ggacctgtac ggcaacatcg tcctctccgg tggcaccacc atgttccctg ggatecgtga 300  
 caggatga 308

<210> 1539  
 <211> 427  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-013-Q1-E1-A5  
 <400> 1539

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 gtcacctacc gccgggtggg gcgcaacgtc ggcagcaact ccagcgcggg gtaccagccg 180  
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 gggaagcagc agagcctggg atacgaaatc accatcgagc tgteaggcaa cccggtgatc 300  
 gtggattcca gctactcggt cggatccatc acctggagcg acggcgcgca cgacgtcacg 360  
 agccccattg ccgtgacctg gccgtccaac ggtggagcag cagccatgta gtagactgat 420  
 gctgttg 427

<210> 1540  
 <211> 411  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-012-Q1-E1-H12  
 <400> 1540

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 gtgacagccc gggcaaatcc attggcataa gctcgatttt gctaggattg gttctgctgg 120  
 ggagagctgc atttgttttc ccattgtcgt ttttgtccaa cctgacaaag aagtctccat 180  
 tggagaaaat aacatttaga cagcaaattg taatatggtg ggccggactg atgagaggtg 240  
 ccgtctccat tgctctcgct tacaacaagt tcacgagatc tggacacact gagctgcacg 300

gcaacgcgat aatgatcacc agcacgatca ctgtggtcct gtttagcact atgggtgtttg 360  
ggatgatgac gaagccattg atccggctgc tgctccctgc ctgcagcaac a 411

<210> 1541  
<211> 432  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-F9

<400> 1541

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cggcaacatg aacccaccca tcatcagcca gggcaaccgc ttcacgccc cgcacgaccc 180  
caacgccaaag gaggtgacca agcgggagta cacgccgtac aaggactaca tcgagtgggt 240  
gtggaagtgc cagggcgact tcatgatgaa cggcaccttc ttcaacgagt cgggcggcca 300  
gaacgagcgc aagtagaca ggttcgactt catcccgcc aagcacggcc gctacgtcgg 360  
tcagctcacg cacttcgccg gactactcaa gtgcatcatc agccagccgt gctactacac 420  
atcgccccgg tc 432

<210> 1542  
<211> 389  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G10

<400> 1542

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gaccatcctc atgaacaggt acgagctcgg gcgcacgctc gggcagggca ccttcgccaa 180  
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ggagaagggtg atgcgcgtcg gcatgatcga ccagattaag cgcgagatct ccgtcatgcg 300  
cctcgtccgc caccccaacg tcgtgcagct gcacgaggtg atggccagca agagcaagat 360  
atacttcgcc atggagtacg tccggggcg 389



<210> 1543  
 <211> 420  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-012-Q1-E1-G12

<400> 1543

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 gggtccttcg acatcaccaa gttgggcgcc tccggcaatg gcaagacaga cagcacgaag 180  
 gctgtgcang aggcattggc atcggcggtg ggcggcactg ggaagcagac aatcctcata 240  
 cccaaggggtg acttccttgt cggacaactc aacttcacag gcccttgcaa gggcgacgtg 300  
 accatccaag tggatggcaa tctgctggcg accacggacc taagccagta canaggacat 360  
 ggtaattgga tcgagattct acgtgtggat aacctgggtc tcaccggcaa aggaaacctt 420

<210> 1544  
 <211> 458  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G2

<400> 1544

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 cccttcggca acttcggccc gggctccgac ttctccaact tcaagctgcc ggcaactttc 180  
 aaccggccca agtcgcagct gcagctgtac ggcgaggccg tgtactgcgg cggcgaggac 240  
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 tggagcatct ccaccacgcg gccccccatc ttgggttcg cgccctacaa cccggtgctc 360  
 ggggagacgc accacgtctc cacgcccgcg ggcctcaacg tgctcctgga gcaggtctcg 420  
 caccgcccgc ccgtgacggc gctgcacgcg acgcacgc 458

<210> 1545  
 <211> 419

<212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-012-Q1-E1-G4  
  
 <400> 1545  
  
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 ggggttcccc ggcgcttggt ccatcatcag cgagaacgcg ggcgtgtccg cgatgcacct 180  
 ggtgatcatg cggagcgcga aggccatcat gttcgacacg gtcaccacgg ggccgtcgct 240  
 gctgcggctg cccaagggga actgccgcct cgatctccgc agcaagcagg tcggcgccaa 300  
 ggactgcgcc gcgcacgcg tcgagtttga ttacgcgcga ggcggtgtca gggccctcaa 360  
 ggtcttgacg gacgtgtggt gctcgtcngg cgcgctcgac gccgagggca acctggtgc 419

<210> 1546  
 <211> 462  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-012-Q1-E1-G7  
  
 <400> 1546  
  
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 gatgaccaac ttcaagagcg ccgtggacga cctccggacg tggctgagct ccgcgctcac 180  
 gtaccaggag acgtgcctgg acgggttcga gaacaccacg acgcccgcg cgggcaagat 240  
 gcgcaaggcg ctcaacagct cgcaagagct gacggagaat atcctggcgc tcgtggacga 300  
 gttctccgag acgctcgcca acctgggcct gccgagcttc cagcgccggc tcctcgcgga 360  
 gcacgctcgc ggcgcgcct cctggatgcc cgacgccaag cgccggctgc tgctggtctc 420  
 ccccgcgac aacggcttca ggcccgacgt gacggtggtc aa 462

<210> 1547  
 <211> 190  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-H10

<400> 1547

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ttgtgtacaa caaatgagta catgtgtaat ttttcattac aggtgaaaat ggacacgggg 120  
tgtcgcgaaa tagggctcaa ctgagattta catttttaaac gcgtatatgt gcatcatcac 180  
agggacacgc 190

<210> 1548

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-F8

<400> 1548

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ccagcttgct cgccgcgccc gtccttcttc ctgcctccg ttccgttccg ttccgtcgcg 120  
cccgcgcgcg ccgcgcgatt cagggatgga gatgaagaag atcgctcgcg ccgtcctcgt 180  
cgccgcctcg gcggccaccg tggcgctcgc cgcgagggt ccggctccgg gccccaccag 240  
cggctcctcc gccgtcgcgc ccgcgcgcgc cgccgcctc ggggcgcgcg tcgcctcgtt 300  
cttcgcctac tacattcagt gagccggccg cagtcggtcg cccggaggcc gacgaagaga 360  
cgattcggga cagagagtga catggctgcg cgcattccga tgcgtgggca tgtttttgat 420  
tcgacacacc ttttgtcttc gttttc 446

<210> 1549

<211> 345

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E5

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cccggtggtc atcacatttc tcacacttcg cgccacctc tcattctcggg gtactgggtca 120  
cgctcctggt taaataatgt tgtcttctgc agttgaattt gcctcgtcat ctgctcacat 180

cacttcgtca gtttctattc gagatgacga ggtagctgat ggataggcgt tcatagaagc 240  
tcttacatac gttaattgtg tgtcgactg ttatggctat catagatgtg tatagacgat 300  
tgacaatgat aagattgggc acttctcctg ttacggccag tactt 345

<210> 1550

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E9

<400> 1550

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tccccgaggc tcaaatgcct agccctagta agggcgggcg tgactggccg ctgctcaggg 180  
acatgatcgc cgataaccac cggctcatcg tgttcacatc caagaaaggg aagcagggga 240  
cggaggggct cgcgtaccag tgggactacg tcgtggaaac ccaatacggg agcaggggca 300  
tggcggatgg cagttgccc aagcggaccg agtcgaagcc catggactct aaggcccagt 360  
cactagtgtc gctgaacttc ttcaccagca acccgagcca aagctggggc tgcagcaaca 420  
actccgcgcc gct 433

<210> 1551

<211> 375

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-F10

<400> 1551

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acgataatca agcccatcgt ctacctctcc atgttttact tcttcaacaa cccaagggtca 180  
tcgatctggg agaactatgt cgtccttctt gcgctcgtct actgcgtgac ggggattgga 240  
tacaccttcg ccattctctt ccagccaagt tctgcgcagc tgtggtcggc gtccttccg 300  
gttggtccaa cctgatagc aaccagcaa aaggacacct tcatcgcaaa cctgtgctac 360

acaaagtggg ctctg

375

<210> 1552

<211> 417

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-012-Q1-E1-F12

<400> 1552

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tggatcatcac cggcaaggga aaccttgacg ggcagggccc agctgtgtgg agcaagaact 120

cctgcaccaa gaagtacgac tgcaagatcc ttcccaactc gctgggtgatg gacttcgtga 180

acaacgggga ggtgtccggg gtcacgctgc tcaactccaa gttcttccac atgaacatgt 240

accggtgcaa ggacatgctg atcaaggacg tgaccgtgac agcgcccggg gacagcccca 300

acacggatgg catccacatg ggcgactcat ccgggatcac aatcacagca ccgtcattgg 360

cgtcngcgac gactgcatcc tcacgagccc cgggacctca aaggtgaaca tcaccga 417

<210> 1553

<211> 429

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-012-Q1-E1-F2

<400> 1553

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tatctactcc tggagggcgg cgtgggtcta cgcgcatcac ggaatatatg tgggcgatga 180

taaggtgatc catttcacaa gaggaagagg acangaggtc ggaacaggaa ctgtcgtcga 240

tattattctt gtgagttcca ccccaaacg aagcaacacg ccttgcccgg tgtgcaccga 300

cgaaaccagc gacagcagca cagagacgaa cggcgtggta tctcctgtc tcagctgctt 360

cctagctggg ggtgctctct accgtttcga gtacgcagtc aaccgggcgc tcttctcgc 420

caaagcgcg 429

<210> 1554  
 <211> 383  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-012-Q1-E1-F3  
  
 <400> 1554  
  
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 cacagggggg acaggaaatc agcggccatg gcctcgattc cggcgacgac ctccgccgtc 120  
 atcttatccg tcctcttctg tgccgcgggt ggcaccgcgg tcgacaacga cctccccgac 180  
 tacgtcatcc agggccgcgt ctattgcgac acctgccgcy ccgggttcgt gaccaatgtc 240  
 accgagtaca tcgcggggcg caaggtgagg ctggagtgca agcacttcgg caccggcaag 300  
 ctcgagcgct ccatcgacgg ggtgaccgac gggaacggca cgtacacgat cgagctcaag 360  
 gacagccacg acgaggacat ctg 383

<210> 1555  
 <211> 210  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-012-Q1-E1-F4  
  
 <400> 1555  
  
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 cgccttttgc tccactcccg cgtccatctt cgtcctcttc ctgttctgtc gcttcgttgg 120  
 ggggggtggg gctgccttcc gagaaatttg ccccggggag atcgtccttg ccctcttcga 180  
 cttgcatctc tggtagaccg ggtttatattt 210

<210> 1556  
 <211> 436  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-012-Q1-E1-F5  
  
 <400> 1556

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 ggtcctcttc tgcacgtgc atggtgagaa ggaagagtca aagggcatcg atgcgaaagc 120  
 gtccgggcct ggtgggtcct tcgacatcac caagttgggc gcctccggca atggcaagac 180  
 agacagcacg aaggctgtgc atgaggcatg ggcacggcg tgcggcgga ctgggaagca 240  
 tacaatcctc ataccaatg ggcgacttcc ttgtccggac aacctaactt aacacgcct 300  
 tgcaagaggc gacatgacca tccaggtgga tggcaatctg ctggcgacca cggacctaa 360  
 ccagtacaag gaccatggta attggatcga gaatctacgc atggataacc tgnatcac 420  
 cggcaaggga aacctt 436

<210> 1557  
 <211> 463  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-012-Q1-E1-F6  
 <400> 1557

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 tgggatccct cgctaataac atcatggtcg tgggcgccgt ccttgccggc cttgtcgtcg 120  
 gcgggtcgtg cgggcccccg aagggtgccg ccggcccca catcaccacc aactacaacg 180  
 gcaagtggct caccgccagg gccacctggt acggtcagcc caacgggtgcc ggcgctcctg 240  
 acaacggcgg tgcgtgcggg atcaagaacg tgaacctgcc accctacagc ggcacgacgg 300  
 cgtgcggcaa cgtccccatc ttcaaggacg gcaagggctg tggctcatgc tacgaggtga 360  
 gatgcaagga aaaacctgag tgctcgggca atccagtcac ggtgttcac acagacatga 420  
 actacgagcc tatcgtccc taccacttcg acttgagcgg caa 463

<210> 1558  
 <211> 466  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-012-Q1-E1-E4  
 <400> 1558

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gactcccca ggggaaagaa tgggtcaacc aaaaggcaaa acaaaccaaa tttaaaggaa 120  
 ttcaaaccaa aaaattgcaa ggcgtataaa gaaaatcaga aggaacctgt aacaatgatg 180  
 gaaggatctc cacctgatgt tgggtcaagat ggtgatgatg agcaaggatg tgatccatct 240  
 tgggctgctg tagttacgcc gggttttacga gtcaagacaa tttatatcag ttcggcgatt 300  
 cttgctgcga agagtccttt ctttttcaag cttttctcaa acggcatgaa agaatcggac 360  
 cagagacatg caacccttag aaatactgac tcagaggaaa atgccctcat ggagctttta 420  
 agctttatgt atagtggaaa gttgacaact actgagocca ctcttc 466

<210> 1559  
 <211> 456  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-012-Q1-E1-D2  
 <400> 1559

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 gctggtgaag tatgtggcgg acgacggcga catcgtgctg atggaaatcc aggacaagtt 120  
 gtcggctgag tggaagccca tgaagctctc ttggggcgcc atctggagga tggacactgc 180  
 caaggcgtc aaggggccct tctccatccg cctcaccagc gagtccggca agaaggatcat 240  
 cgccaaagac gtcaccccg cgaactggag acccgatgcc gtctacactt ccaacgtcca 300  
 attctactag actttgaatt cnettcgatt catccggcac agcgggctat ggaccttcag 360  
 cagcaagcta attaagttgg cagcatgcac cgctaacctt atatactact gagacttcca 420  
 aattctagta tatgtaatcc ttttgttcgg gttcaa 456

<210> 1560  
 <211> 258  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-012-Q1-E1-D6  
 <400> 1560

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catcgatcgc ggatgtggca acagcagaaa cttatcagcc atggggaagt cggcgtcggg 120  
gatggtcgtc accaactagt ggatgctcac tttccaggag ctcaaggcga agctcaccat 180  
ccggttcac acattctcca tcaacgatga catcgaccaa gtcgctcgtcg acacgatgtg 240  
gcaacccggc gacgtcta 258

<210> 1561

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E12

<400> 1561

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gaaaagctgg ttaatgagaa gctgcacagc ctgcatgggtg tggcaacaag gtgcaatgat 120  
cctcagctga tagacttcat cgagagtgag ttcctcgagg agcaggtgga agccataaat 180  
aaggtctcca agtatgtcgc gcagctgagg agagtgggca acaaggggca cgggggtgtgg 240  
cactttgatc agatgctgct tcaggaaggg gcctgaaggc caacaagggg ggcgtggacg 300  
gagctgagct ctgggtgtgt tattttcttt tctttccagt tggttagtgt tttagttgta 360  
gaacggtgtt gcgttgccca catgacatga tggatg 396

<210> 1562

<211> 430

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-012-Q1-E1-E3

<400> 1562

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cgcttggtca accccatcgt caccctcaag gccgatggct catctccac ctctggcaat 120  
ggcgtcgcc tgatcagctc caccaaccaa gatgaacttg gagcgttatg ccaacagatg 180  
cactacaaga cgttgtgctc cacgatgacg aactgctg nggtgactac gccagagcaa 240  
ctcttagatg catccctgcg gattacagcg gtgaaggcag cgatggcgga gatgaagcta 300  
gacaatgcaa taaaatcagg cagtgtcaa ggtaaccgga tgatgtcgtc gctaaagaca 360

tgcaaggaga gctacgcgtc gctggtaaac tccatcaata ccacgcggaa cacgctcaaa 420  
agcggcggca 430

<210> 1563  
<211> 417  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-C10

<400> 1563

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gtaagaagtc gtctaattct tggatcgaat tagacgactt cttcgtccct ctcttcatta 120  
gcacgctaac ttgtaatctg caggatctaa gcaaagactt gatttagtta tggacggatt 180  
ggtaggcctc ttgaaagttc gcgtgggccg gggatatcaac cttgcctacc gcgacgcaag 240  
aggcagcgat ccgtatgtcg tectacggct tggcaagaag aaactgaaga caagcgtgaa 300  
gaagagattc gtgaacccca aatgggaaga agagctaact ctgaacgtca cagattccaa 360  
ccaaccactg aagctggaag tgttcgacaa ggacaccttc agcagagacg aacccat 417

<210> 1564  
<211> 459  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-C3

<400> 1564

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acggaggtgt cggcgtctgc cccgcgcgtg gcgttccctg accaccagcg ctcgctgctg 120  
acgctgggga acagccacct gaggcagcgg atcgcggcgc tcgcgcagga caagatcttc 180  
aaagatggtg accgccattg ccggccgccc ctgctcctcc cgactacgac cctcgccgct 240  
catcaggagg cactgaggaa ggagatcgag aggctgaggc aaatctacca gcagcagagc 300  
ctgaagagcg gcagggagcc cgacgcggcc ccgtcggtec gcgacgacaa ggacatgatc 360  
ggcagcgagg ggaccgccgc ggccgggccc gccctcgtga tgaggaggag gtggtggggc 420  
gacacgtcca gacatccgag tcggtcgtg tagtcgggg 459

<210> 1565  
 <211> 399  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-012-Q1-E1-C4  
  
 <400> 1565

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cgtcgcctat cgcgaacact acttctcgct atttgctgtc gagggagggt aggaaacgaa  120
tggtgttcat gctgtcgcga aagacactat ctttcagtct gataaagggt actgacggaa  180
gagactgctc ctgcgcgatta atacttttcc tgatcatcaa gacgaaatta ggaaggatat  240
tcatacagctt aggcacatct actatcatca tcacctgaga cacagtatga atgccaaactc  300
ggatctgtct gtccgcgaca tctggacatg attctaagcc aggggaccgt cttgcccagt  360
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<210> 1566  
 <211> 411  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-012-Q1-E1-C9  
  
 <400> 1566

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gatccagcac tcccgcgacc gctgccgcgt cccgctcacc ctcagggggg gcatcaatca  120
cagcggcgct cgctaaggcg ggcccatctc cttcctccgc aaggagccgc tccccaactt  180
gcagcaagct gtcgcgcgcc tacgacctct acaacgagac gtccgataat tcccaagcat  240
gcaaacaaac tttctctcgc tctctttttt tttaacaaaa acatcccata tacatatagc  300
acatttgttt ccgtttgttt atgcccgcat gcatgctatc agacatcctt cctaagaaaa  360
atztatgtta ttccatctc gcattatttt agtatctacc attcaagttt t                               411
  
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<210> 1567  
 <211> 452  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-D1

<400> 1567

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caccctcgag gtggagtcgt ctgacaccat tgacaacggt aaggccaaga tccaggacaa 180  
ggagggcatc cccccagacc agcagcggct catctttgct ggcaaacagc ttgaggacgg 240  
gcgcacgctt gctgactaca acatccagaa ggagagcacc ctccaccttg tgctccgtct 300  
caggggagggc atgcagatct ttgtgaaaac cctgaccggc aagactatca ccctcgaggt 360  
ggagtcctct gacaccattg acaacgtcaa ggccaagatc caggacaagg agggcatccc 420  
tccagaccag cagcgggtca tctttgctgg ga 452

<210> 1568

<211> 312

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A5

<400> 1568

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caacgccggc cagccaagc ccctgacgcc tggcggggcg gtggtacacc acaaccacgg 120  
taagttcacg gccggggcgt ggtaaccgc ccacgcgacc ttctacggcg ggcgggacgg 180  
gtccggcacc acggctggcg cgtgcgggta caaagacacg cgcgcgcagg ggtatggcgt 240  
gcatacggtg gccgtgagca cagtgtgtt cggcgactgc acggcctgct gcgggtgcta 300  
cgaggtgcgc tg 312

<210> 1569

<211> 331

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A8

<400> 1569

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ctcgtatctc acttcattag cacgcgcacg tgtcatcggc aggatctaag catgtgactt 120  
gagtgactca tgggtccgatt ggtaagcgtc ttgaagggtc gcgtgggtcat gggcatcaac 180  
cttgccgaac gcaaagcaag agggagcatt acgtatgtcg tccgacagca tgtcacgatt 240  
acgctgaaag aaggcgtgac cgaaacatgc gtgcacgaca tcagggacca agacaaatat 300  
ccgattggca tacatttttag tcaaacattg a 331

<210> 1570

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A9

<400> 1570

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cggcggaat aatggcctcg gttccgggtc cggcgacgac gaccgccgcc gtcatectat 180  
gcctatgctg cgtcctctcc tgtgccgagg ctgacgaccc gaacctcccc gactacgtca 240  
tccagggccg cgtgtactgc gacacctgcc gcgccgggtt cgtgaccaac gtcaccgagt 300  
acatcgcggg cgccaagggtg aggctggagt gcaagcactt cggcaccggc aagctcgagc 360  
gcgccatcga cggggtcacc gacgcgaccg gcacctaca 399

<210> 1571

<211> 313

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-012-Q1-E1-B1

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cgtcgctga tcagctccac caaccaagat gaacttggag cgtttatgcc aacagatgca 180  
ctacaagacg ttgtgctcca cgatgacgac actgcctgng gtgactacgc cagagcaact 240

cttagatgca tccctgcgga ttacagcggc gaaggcagcg atggcggaga tgaagctaga 300  
 caatgcaata aaa 313

<210> 1572  
 <211> 383  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-B12

<400> 1572

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 cagatgacat cgaagcgagg taggcacetc tgatctagga gcaatgtcgt ggtaagctta 120  
 cgtgaggaag cagctgatat gtgacatcaa gggccagcaa ctcacggcgg cgacgatctg 180  
 ctgccacaac tgattcctct gggagcagag catcgcgttc cccgacttca tgaccgaaga 240  
 catgggcaac atcatgaatg acttcgacga gccagagcac ctcgcgccga catgcctgtt 300  
 cctcggacct agcaagtaca tggatcatcca atggtaacct ggtgccgtca tccgtggcaa 360  
 caacggatta ggatgcatca acg 383

<210> 1573  
 <211> 419  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-B3

<400> 1573

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 accgccgcca tccgagagaa caagccaacc gaccccgctc ccaaggcaat ccgtcgccga 120  
 cgtaccaccg ccaccgcagg agcgagatgg agatgaacag gatcctcttc gccgtcctcg 180  
 tcgacatcgc cgctcgggc accgcagtgc tggcctccac cgaggccgcc gccgcgggcg 240  
 ccccaactgc ctcagagtcg tccgccgagg ctcccgtgtg cgctggcgct ggcgtgccc 300  
 ctggcgccgc cgccgcgggg cctccgcca tcaacggcgc gcccgactc gcggccgagc 360  
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<210> 1574

<211> 447  
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 <223> unsure at all n locations  
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 <400> 1574  
  
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 gcgcgcgcctc tcacgaccca tcccgctcgtg cgtcatcgag ctccggcgagg cggggccatgc 180  
 acgcgtccag ctagctcaca cagcgcgcgtc tcgaccggct gccgggtgctc caccgggccc 240  
 gcgtccacat cacggcgggc gggcgcgcgcg gtgaacgggt tcctctccgc atgaccctgt 300  
 gatggtcgggt gggttcctgc ggcgcggcca cagcctcgac aggctcctgt cggangangcg 360  
 ccgggccttt tcgccaagcc cctcgttctc gtctctctcc tccacgccgt cgtctccgcg 420  
 tggcagcagc gtcaggagcg gcatgat 447

<210> 1575  
 <211> 200  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-012-Q1-E1-B7  
  
 <400> 1575  
  
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 gcagtcgcga tggcagggtc ctgaccatat cagttgacga agtcatgctc ggaggcgggt 120  
 gcttcgctct cagccttggtg caggccatcg ctgtctcctt ggggcggcat gctcactgag 180  
 gagctgcggc tgtcaacctc 200

<210> 1576  
 <211> 423  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-011-Q1-E1-H10  
  
 <400> 1576  
  
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ttccttctag cgctcttctg caccgtgcat ggtgagaatg caaactcatc ggacatcgat 120  
 tcagaagcgt ccggggcccg tgggtccttc gtcataacca cgttggggcg ctctggcaat 180  
 ggcacgatgg ctatcacgaa cgctgtgcaa gaggcgtggg catcagcgtg ccgcggcacc 240  
 gtgaagcaca cgatcgatcat cccaagggc gacttcctcg acggaccact caacttcaga 300  
 ggcccatgca agggcgacgt gaccatccag gtgaatggca atctgctggc gaccacggac 360  
 ctaagccagt acaaggatca ttggtattgg atcgagattc tactcgtgga caaccttgtc 420  
 atc 423

<210> 1577  
 <211> 454  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-011-Q1-E1-H2  
 <400> 1577

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 tggcgacg agcgggtggc acgatgacga ctaataagcc cctcctcctc ctgcacctgg 120  
 cgtccgcgt ccttgggtgg ggcgcggccg ccgcgaacgc gcccgggggg gcgttcagca 180  
 actgggtggc gatgaaccag cagagctacg cgctgtacgc gcagaagtcc gtcggggacg 240  
 ggggcaagga gccctggac aagaagctgt cggaggcgga gaagaagaag gtcacgtacg 300  
 tgggtggacc cagcggcaag ggcgactaca ccaacatcac cgcggcgctg gaggatatcc 360  
 cggtgagcaa caccaagcgc gtgatcctgg atctcaagcc cggcgctcag ttccgcgaga 420  
 agctgttccc tgacatcagc aagccgttca tcac 454

<210> 1578  
 <211> 431  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-011-Q1-E1-H4  
 <400> 1578

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 catggcgtga atcaatatag ttgccagttt gttaaattag tttcataaaa tgttgtgtctc 120



tgaatttggg aattttccga gatttgttca ttgcttagtt gaactatatg aggccgtttc 180  
 ttgggcggtg attcctgaag cattcacagg ttactataag aaagaaccat gacgtgttga 240  
 tattttctatg aaatattgta ttttcatata atagtgttaa agcttctctt tgtctgtgaa 300  
 tctataggca ggtcaatact tcgtcattaa tttgtaccgg atttcttgtc attcatttca 360  
 taaaaacatg tagttttgat gtatttgggc ataactaaca attatctatc cttctgaact 420  
 aaactagtat c 431

<210> 1579  
 <211> 425  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-011-Q1-E1-H6

<400> 1579  
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 cgccctctac acttctcgac ataaccatcg agagggcggt cgagagaaac gagagcggca 120  
 gacaccatgg ggagctcgag gaccatcgtt gcgtccccc tgctctcct cgccctcctc 180  
 ctcttggtt tcgcgccac cgccgaggcc cgcgttgctc ccgagctgtt tggcgaggac 240  
 caattccagc ggacatgcaa ccaggtgcac ttccaggaaga tgtgccagag cttgacgagg 300  
 ctcccgaggg tgaccacgcc gcgcgagctg ctgctggcgt cgatgcgcgt cgcggcggag 360  
 aaggccaggg aggccaagag ccgggtggac gagttcgcgg cgaaggaaca cgagggccgg 420  
 ccgat 425

<210> 1580  
 <211> 440  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-012-Q1-E1-A11

<400> 1580  
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 ttgcgccact gctcgttatc ctctcttgc attgcattgc aggtcgtagt tgagcagcag 120

caaccactgc acaggatgtc gtggcagacg tacgtcgatg agcacctcat gtgcgagatc 180  
gagggccacc acctgagctc tgccgccata gtcggccacg acggcgccgt ttggggccag 240  
agcacccgat tcccacagtt caagccagag gagatgacca acatcattaa ggacttcgac 300  
gagcctgggt ttctggcccc gatcggcctc ttccttggcc ccaccaagta catggtcatc 360  
caaggcgagc ccggcgctgt catccgcggg aagaaaggat ctggaggcat aactgtgaag 420  
aagaccggac aggcgctgggt 440

<210> 1581  
<211> 435  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-G8

<400> 1581  
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ctcttggtgc tagccctcgc gctagtggcg gccaccgccc cacaggtagc ggaggcaaag 120  
aagaagagag cggcggagag cggcgaggcg gcggaggcga agaagatcca ggacgacttc 180  
tgctcgacgc tgtgcgaggg caagaagggg acggacctgg tcgtgtgcaa ggagtccctgc 240  
gcgctctccc agcagtccaa cctggtgctg tacggcagga tccagtgcaa gggcaagtgc 300  
accgagcaga agggcatcac ggcgccggcc atgaaggctc gccaggagga gtgcgacaag 360  
gcgtacgtgg tgaaggcggc cgaggtcacc aaggcctgca gcgtcacctg cgccaaggag 420  
aagaacccgc gcctc 435

<210> 1582  
<211> 433  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-011-Q1-E1-F3

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tgccggttcc agctgccggc caccgacgac aagagctcat gcagcggcgg cgacggtggg 120  
ttcgtcagtg tcgatgcgga tcgtgaaggc agtgacaacg gcgngngtga tggatatggca 180

agctctccgg gcaacgccga gctagctgaa gctgaagaga gtggcaggcg gttgccgccca 240  
tccttgcaagt ggctcaacag cctgttctcg ccgtcggcgc agtcctccgg tagcggcggc 300  
agcagttcgc atcattggga gaactaagca atattgccat ggttgctgcc gcttgaaagc 360  
ttggcccgtt ggttggtccc aatgtacata ngaaggagca ngagcatgcc gggttggtgc 420  
catgtaaaaa tct 433

<210> 1583  
<211> 329  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-G11

<400> 1583

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gctggatcga attgtctcac gttaacaaca tcgggatcac cggcgcgggc acgctggacg 120  
gccagcggac cgcggtgtat agcacgagga agaccgacaa cgtgaaggcg atgcccaaca 180  
cactggtgct gtttcacgtg atcaacgcc aatcaaacta ctcaactcca 240  
agttcttcca catcaacatc gacaactcag atagcatcac cgtgaaggac gtgaacgtca 300  
ctgcgccccg cgacgttgag aacacggac 329

<210> 1584  
<211> 421  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-G12

<400> 1584

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ccctgctgct ccacctgccg ccgcctcgga gccgaagaaa gacaaagcag aatcggatca 120  
ttcagactca tcgtcatctt cttcggacga cgaagaggac gaagaggagg aaaccgagga 180  
gcaatgataa gggcatgcag gtgtgttcct aggcttcaga tgtggaaggc cggccacgca 240  
gatgaatgtg gcttcatgca cctattctgt aaggagctca atatgtagac cgtggattaa 300

ttaatccttt gggggctagc tacatggtgt ggttgcggtt gcggcagtgt aaatttgagg 360  
 tgttcataat tttttntttt tttgactgtc aacgggggaa aagctcccca cctggatttt 420  
 c 421

<210> 1585  
 <211> 329  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-011-Q1-E1-G2  
 <400> 1585

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 ctcaacgacg acgcagtagt acatatggag aaagcggccg gcgtgagccc ggccaagctg 120  
 gccctggccg ccgccgccgt gctgctgtgc ctgctgctgc tgctggccgc cgggccccaa 180  
 ggggtctccg gcgccgacgg gaggaggaag acggcatccc cctacgataa gttgatcagc 240  
 tgcanggtgc tgggcaactg cgacaagaac aaaggcccgg aggccacccg ccccgggaag 300  
 ccggtcaaca ggtacacccg cggctgcag 329

<210> 1586  
 <211> 442  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-011-Q1-E1-G3  
 <400> 1586

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 attgaaagga cggccagttc tgggccgtat ataccaaggg aaggagccac cacaatttgt 120  
 tgctcttttc cagcccatgg ttatcttgaa ggggtggaatc ggatctggat acaagaagct 180  
 catagaagaa aaaggtgcta tgggtgagac ttatactact gaaggcatag ctctaattcg 240  
 agtatctgag acatctatct acaacaacaa gactcttcaa gtagatgcgg tagcaacgtc 300  
 tttaaagctca acggagtctt tcgtactgca atctggaaat gctatgttta catggtttgg 360  
 caattctagc acatatgagc aacagcagtg ggcagcaaaa gttgctgaat ttttgaagcc 420  
 tggcggttgc gtgaagcact gc 442

<210> 1587  
 <211> 431  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-011-Q1-E1-G4  
  
 <400> 1587  
  
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 ccactacgag aatatcaaga tggaggactc agccaacccc atcttcatcg acatgaagta 120  
 ctgccccaac aagttgtgta ctgccaacgg cgccctccaag gtcaccgtca aggatgtcac 180  
 cttcaagaac atcaccggca cctcctccac cccggaggcc gttagcctgc tctgcactgc 240  
 caagggtccca tgcaccggcg tcaccatgga tgacgtcaac gtcgagtata gcggcaccaa 300  
 caacaagacc atggctatat gcacgaacgc caagggcagc accaagggtt gcctcaagga 360  
 gcttgcatgc ttctagaccc tccatcgact gacccatctc tctagttata atttttctct 420  
 cgtccttgca t 431

<210> 1588  
 <211> 197  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-011-Q1-E1-E11  
  
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 tctaggacat gttcgacctc atctatacca ggggttgta ttacgccgta gtcgatcacc 180  
 atctattctg gtgcgct 197

<210> 1589  
 <211> 444  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-011-Q1-E1-E2  
  
 <400> 1589

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ctgcaattgg ggggaggctc ctctccgccg ttggaaccgc tgcggcgctc cagcctgtgc 120  
gactttcctg ctggttcctc atccctcagg gagagatttt gcattctttg gcattactgt 180  
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tgaacgggca catcaatagt ctctggcctc caagggaaat tgggaaattc agattgaacg 300  
tggctgcac atttttcctt tcatttgtct tttcagcaac agcgatccat tctcgtaggg 360  
gggagagaga gagagagaga gggagagaaa tcaaagagga gagtgatcat ggagcatgtg 420  
atcggaggga aatataagct tggg 444

<210> 1590  
<211> 449  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-011-Q1-E1-E4  
<400> 1590

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gtacccgctg gagaagttaa ctctggaagg cgagtcctac cacaagagct gcttcaagtg 180  
ctcgcaaggg ggctgcatcc tcaccacctc ctctacgcc gcgctcaacg gcgttctgta 240  
ctgcaagatc cacttcgcgc agctgttcat ggagaagggg agctacagcc acatgatgaa 300  
gaagagcccg tcccaggata cgctgccgga catggcagcc gacgagcaac cgccggaacc 360  
ggcgccaccg caagacgggg aaggagagga caactangan gaanggaccg ccaccaatat 420  
atatcacaca cacacacaca cactcacac 449

<210> 1591  
<211> 445  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-011-Q1-E1-E6  
<400> 1591

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 cttgctcgcc ggcgccgtcc ttcttcctcg cctccgttcc attccgtccc gccctccacc 120  
 gccgccgccc cattcagga tggagatgaa gaagatcgcc tgcgccgtcc tcgtcgccgc 180  
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 ctccgccgtc ggcgccgccc tcggcgccgc cctcggggcc gccgtcgcc cttctctcgc 300  
 ctactacatt cagtgcgccc gccggggcgc ccggaggccg aggaagagac gaaggggaga 360  
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<210> 1592  
 <211> 435  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-011-Q1-E1-E8  
 <400> 1592

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 aatctgctag ttgatgttca ggggtgtagc aaattggctg actttggaat ggcaaagcat 180  
 ttaagtactg cagcccctaa tctttcactg aagggaacgc catactggat ggccccagag 240  
 atggttcaag ctacactaat gaaagatgta ggctatgac tcgctgttga catatggagt 300  
 cttggctgca ccatcataga gatgttcgat ggaaagcctc cttggagtga tcttgaaggg 360  
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 gaaggcaaag aattt 435

<210> 1593  
 <211> 450  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-011-Q1-E1-D8  
 <400> 1593

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 ccggcggcgg ggggtgggcgc gggcgcggat ggcggcggtac agcgaggcgt ccacctcggg 180  
 tctgccgcgc cgcgcgcgc cgcgcagga ggcggcgag tcgtcgtccg ggggcaggag 240  
 gcgagggcgc aaggtgggcgc cggagcccaa ggagccggcg gaggagggga ccgccgcgt 300  
 gccgccgatg cccggctcgc ccagcttcag gtactactgc cagaagaaga cggcggccgt 360  
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<210> 1594  
 <211> 444  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-011-Q1-E1-C2  
 <400> 1594

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 tgggcgcctc cggcaatggc aagacagaca gcacgaaggc tgtgcaggag gcatgggcat 180  
 cggcgtgcgc cggcactggg aagcagacaa tctcataacc caagggtgac ttccttgctg 240  
 gacaactcaa cttcacaggc ccttgcaagg gcgacgtgac catccagggt gatggcaatc 300  
 tgctggcgac cacggaccta agccagtaca aggaccatgg taattggatc gagattctac 360  
 gcgtggataa cctggtcac accggcaagg gaaaccttga cgggcaaggc ccagccgtgt 420  
 ggagcaagaa ctccctgcac aaga 444

<210> 1595  
 <211> 421  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-011-Q1-E1-C4  
 <400> 1595

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ccacgtcaac cacggcaagt ttaaggcgga gccgtggacg gacgggcacg cgacgtacta 180  
 cggcggggcgc gacgggttaa ctgacaccac ggacggccgc gctgcggtct acaaaggcga 240  
 gctggggaaa gactacggca ccctgacggc ggccgtgggc cgtcgctgt acaccaacgg 300  
 caccgggtgc ggcgctgct aagagctcaa gggccccaag ggcaccgtgg tggtagcggc 360  
 caccaacgag gccccgccgc cgtgagccg gcagaagggg caacacttcc acctaccat 420  
 a 421

<210> 1596  
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 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-011-Q1-E1-C5  
 <400> 1596

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 ctgcaactgcc atccctagcg taacactaag cctagaggag aaagaaaata tcaatgggga 180  
 tgttcccacg atcacctcgg ccgcaagcaa cgatgaggat gcgttgttca gtgtcggaga 240  
 atccaccaag gacgatggcc atcgcttgac gatggaatgc accactcccg tctcctccag 300  
 tagcccttcc actcgcaaga agcgcggggc gttcagcctc ttcagggcga tgttcctgtc 360  
 cttcggccgg agcgacgaca gcatgaagat tacagacgac gacaccacga tccccaaag 418

<210> 1597  
 <211> 430  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-011-Q1-E1-C7  
 <400> 1597

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 tgcggctgca gcggcaggcg tgctgcgagc cgtcgggtggc gccgtcgcgg gcggtgttcg 180  
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ccggcggtgcc ggtgttcgtc atgatgccgc tggacaccgt caaggagtgc ggcaccgcgc 300  
 tgcaccgcgc caaggcgggtg caggccagcc tctccgcgct caagagcgcg ggcgtcgagg 360  
 gcgtcatggt ggacgtgtgg tggggcatcg ccgagcgcca cggcccgggc cgttacaact 420  
 tcgcgggcta 430

<210> 1598  
 <211> 133  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-011-Q1-E1-D6  
 <400> 1598

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 attctctcag tcg 133

<210> 1599  
 <211> 415  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-011-Q1-E1-A6  
 <400> 1599

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 gtgcactacc ccgctgcgga tcagcgtctg cagacgttcc aaatttttca ccctgggtatt 180  
 tccccccaac attgccacca tctccgaagt ggagatcaag gagcacgggtg gcgatgactt 240  
 ctcttttgag ctcaaggagg gcccggccgg cacctggacg cttgacacaa atgccccact 300  
 caagtacccc ctctgcatcc gctttgccat caagtctggc ggctaccgca tcgccgatga 360  
 tgtcatccct gaaaatttta tagccgacac cacctacaag aacaacctca gcac 415

<210> 1600  
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 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A7

<400> 1600

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acccaaacaa caggatcacg atcgagaagc tggctgagca cccttggttc aagaaggggt 180  
acaggccggc cgtcatgctg gcacagccgc acggctccag cagcctcaag gatgtccagg 240  
tcgccttcag caacgccgac cacaaggaca gcagcagcaa ggtggaacag ccggcggaca 300  
gtccttgaa gccggcgagc ctgaacgcgt tcgacatcat ctccactcc agagggttcg 360  
acctgtcaag cctgttcgag gtggaccaag agcagaaggc cagcaactcg cggttcatga 420

<210> 1601

<211> 187

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A9

<400> 1601

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cggggtcctc gtcgtcggcg cggtcattgt gcgggatgta ggcgagacct ttcattgactc 120  
gtgtatcaag acccagttcc ccaatattctg cgtccacagc ctgcgcgcta atctgtacag 180  
ccacaat 187

<210> 1602

<211> 287

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B1

<400> 1602

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ggcggacgcg tgggggcttg cgctcaagtt cgcagtgttc gactaggaga tctgaactc 120  
ccctgaccgt gcgtgcaacc ttgcaaagca ggcctttgat gaggcaatct ccgaactaga 180  
cagcctggga gaggagtcct acaaggacag cactctgatc atgcagctcc tgcgtgacaa 240

cttgacccta tggacttccg acaccaacga ggacgccgga gatgaga 287

<210> 1603  
<211> 190  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B3

<400> 1603

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tccggagcat ccggttcacc tgcggcaact catcgtgcgg cttctctagg gcccatgacc 120  
gtcgtcgaaa cttgtaatca cacgttaagc cccttgatg caatggtatt gctcgtgca 180  
gcacccatca 190

<210> 1604  
<211> 423  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-011-Q1-E1-B5

<400> 1604

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ccacgatgac gactaataag cccctcctcc tcctcgccct ggcgctccgag ctcccttggtg 120  
cggcgccggc cgccgcgaac gcgcccggcg gggcggttcag caactgggtg gcgatgaacc 180  
agcagagcta cgcgctgtac gcgcagaagt ccgtcgggga cgggggcaag gagcccctgg 240  
acaagaagct gtcggaggcg gagaagaaga aggtcacgta cgtggtggac cccagcggca 300  
agggcgacta caccaacatc accgcggcgc tggaggatat cccggtgagc aacaccaagc 360  
gcgtgatcct ggatctcaag cccggcgctc agttccgcga gaagctgttc ctgaacatca 420  
gca 423

<210> 1605  
<211> 419  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B7

<400> 1605

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caacatttttg ttcactagtg tggtagcttt gttgattgga gtgcgcaatg ggaggctgtg 120  
cgggaaaggt acgtcgtgat gacgaagaaa agcttgattt taaagggtga aatgttcata 180  
ttataacaag caatgagggc tgggaccaga agattgcaga agcaaacaga gatgggaaaa 240  
ctgttggttg aaatttcagc gcttcctggg gtgggccatg cctgtgcatt gctcctgtct 300  
atgctgaaat gtcaaagact tatcctcaac tcatgttctt gacaatagac gttgatgacc 360  
tgatggactt cagctcttca tgggacatcc gtgcaacccc gacattcttc ttcctcaag 419

<210> 1606

<211> 441

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-C1

<400> 1606

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cagggagacc tggttcgggtg gcatccacaa agcctgcagc agctgcatcc acacaaaaac 120  
ctggcggtag cccaaagaaa ggtgaggtca aacctgctgt cgacccagtt caaactccag 180  
ccacaagtgc agattcacca aaatccgagc ctagtgtccc accactttct gagaccgaag 240  
aagtagacaa catggcaatc gatgaggtca gtggtgatgc tgcaganggc gcggaagagc 300  
ttgaccctgc gctcgaggag acgccgatgg aggagacgat tcgtgtgacg cgcgccaagc 360  
taaggaagcg caacgccacc gaggattctg ctgggaatta gctgcatgcc gttgttttcc 420  
ctgcacattg tattgatctt t 441

<210> 1607

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A5

<400> 1607

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gaggaggaga ggaaagagac gaagggcgcg ccgggaagga ggaccaggag ggggaggcac 120  
acaacgcttc ctcttgacac ggggagtcct caagcctcct ccttggcctt ggctccaatt 180  
cggggtgccca taacacgacc tctgccggcg gccggccacc ggcacccatg tcgcccttct 240  
acctcgctcg cggtgcttcc aagctagtga gaaggattac ctcgagaca tcagtcgagc 300  
tcaagattct ctctgaaaaa tggcggcttc tcctcgctgg cgtcattttt cagtacattc 360  
atggtttggc cgctcatggg gttcattatt tgcaccggcc ggggcccaac ctt 413

<210> 1608

<211> 71

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-H1

<400> 1608

ttccaaaacc ttttcccccc cttaaacttt tcccttttcc tggcaaggga aaaaaacttt 60

ccccggcaaa a 71

<210> 1609

<211> 443

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-H12

<400> 1609

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actgcaagat ccacttcgag cagctgttca tggagaaggg gagctacaac cacatgaaca 120

agaagagccc gtcccacgag gttctgccgg acgtggctga cgaggagcaa ccgccggtac 180

cagcgccacc gcaagatgag aaagaagagg acaactaaga tcggagcgac caacaaccac 240

ccatgcatat atatcacgca gactgaagtc tacacgtttg ccatatttct ttacgacgac 300

gacgcttctt tattccctcc tccctttttt ttctcttaa tctctctgtg agaccggttt 360

atcatcacgc tgcaatcaag tgtgccagat gccttcgtta cgtctgagga tcacgacaat 420

ggaaaatctg acatggacct gtc 443

<210> 1610  
 <211> 263  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-010-Q1-E1-H2  
  
 <400> 1610  
  
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 ttttatccgt cctcttctgt gccgcggctg gcaccgccgt cgacaacgac ctccccgact 180  
 acgtcatcca gggccgcgtc tattgcgaca cctgccgcgc cgggttcgtg aacaatgtca 240  
 ccgagttcat cgcgggcccc aag 263

<210> 1611  
 <211> 291  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-010-Q1-E1-H4  
  
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 ctgctgcttc tggttggtgt tgcgcaggcg gtagtggagt tggtgctgc tgatgataat 180  
 atcgcgcgcg ccgtgctggt cacggcgggtg aacaatggcg agccgcctca gcattgcgcg 240  
 accccggtga ccgtgcagga ggcttgccgc ggcgcgtccg aaacgcaccc c 291

<210> 1612  
 <211> 189  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-010-Q1-E1-H8  
  
 <400> 1612  
  
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 atcatgctat ctcccgaatg ttttcatgtc gattccaatg tggatttcag tacggtacat 120

aagctcatct tgtatgttgg tcaactgctt gcaccactta gtcgtggact ttaaatacga 180  
attcggttc 189

<210> 1613  
<211> 349  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A11

<400> 1613

gccaaacccac gcgtccaccc acgcgtccgc aagcacctcc tcttcccccg ccgggcaaca 60  
actcagccgc cgcaaccgcc acatcagcca tgggcgcctg cgcaaccaag cccaagacgc 120  
ttgaggggca ggccccagct gagggccgcg tctccacacc caaggttgcg cccgaggcca 180  
ctccaatctc cgttgaggtt gcggctgatg aacaggtagc tgagaagggtg gtggtggagg 240  
agccggctgc ggcggccgac gttgagcatc agaaggctaa tgaggtgctc gctccagagg 300  
cggccgtcgc cgagcccgac catcaagagg aggaagccgt ggagaagac 349

<210> 1614  
<211> 190  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A2

<400> 1614

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gctctttctc tgtcctctcc cggctctcctt cccatggctt cttatcgggg tctagggggg 120  
cctttcttcc tagtgtccag ggttcttcgc gctcgcctcc tctgatcgtc gtctcttttc 180  
acgtctccat 190

<210> 1615  
<211> 338  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A3

<400> 1615



cccaggccta cgaacgcgtc caccacgcgt ctgcgacatc cgatttctca ccctactcat 60  
cagaacctag ctagctaggc gtagaacgaa tgacgaggca gggcggcagc aggtcgacga 120  
cgacgctggt cgccgccgtg gccgtagttc tggccgtggc ggcggcgtcg tccctggccg 180  
gcgtagggcgc cgcggaagaag gcggggcgggt tcgtgggtgac ggggcgcgtg tactgcgacc 240  
cctgccgcgc cgggttcgag acgaacgtgt ccaggagcgt ggccggcgcg acggtggaag 300  
tggtgtgccg gcacttccgc gcgtccaagg agacgctc 338

<210> 1616

<211> 398

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-G9

<400> 1616

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cctggcatgg tgggtcaatct ggacgatctt cctttgactg cagctgagaa gaagctaattg 120  
catgcgtata acgagaagcc tgtcctttct ataccacagc atgagtttta cctgggtgat 180  
aactacttcg agatcgacat tgacatgcac agatttagct acatctcaag gaaagggtttt 240  
gcaacatttt tggacaggct aaaagcatgt gttctagatg ttgggctaac tattcatgga 300  
aataaagctg aagaactgcc ggaacaaatc ttatgctgtg ttaagttgaa tgggatagat 360  
tacaccaa at accagcctct tttgactcaa gctgcctg 398

<210> 1617

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A4

<400> 1617

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cagtgcctgg gccgcggttg gccacggttg gcgaccctgg tggttcaccg gtgcactgcg 120  
aatctaggcg ggtcttctcg gggctcgatc tgggtctcat ggttggctaa tttctcaccg 180  
gagcatttgg gggacgggcc gtgcgcctcc aatttctcgc cgtcgacgtg ttctccgcgc 240

cgggactaca gcgtgccatg ggcgggactc ctgggagctt aatccgcgcg cgaggtcacg 300  
 agtcacctga agatcatcct ggtacctgga atctcaagtc ccagggtcaag agcagggtacc 360  
 acaggatgag gcgcgtggag gatgctgtga tgagttcgtg agtgggtctag gtcgtcgtct 420  
 cccagtcaac tt 432

<210> 1618  
 <211> 419  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-010-Q1-E1-F11  
 <400> 1618

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 ataagaacaa agacgtacga taacctgctt attttgcgac ccatcccgtt cccacgcaaa 120  
 ggcgccgagc gtgatctccg tccgtgccgc catggcctcg caccggggcgc tgctgcagca 180  
 gctcctcgcc gccgcgctcg tcgctgcgct ggcctcagtc gcatccgcgc acgacgccat 240  
 cgccatgcc accagcctgg ctctcgtgga gcatagcccg cggggggtcct acgtctgcga 300  
 caagccgggc tctgaatata aggccgtcga cgacgaagag gaccccgccc ctgtctgagc 360  
 cgtatcgggt tcactaggat agatcccagg gacgacatcc ctcctttgac tgacgcgcgc 419

<210> 1619  
 <211> 341  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-010-Q1-E1-F3  
 <400> 1619

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 tgtttttttt tttttttttt tttttttttt tttttttttt ttttaaccccc aaaaaaaagc 180  
 aattaagcca caaaaataaa tgggaaacaa aaaaccata tataaaacac atgaaaaaaa 240  
 tgatggaaac cgtttttcaa acccccacaa aatttgagtt taaaatccaa aaccgtgatt 300  
 caaaaaaaag ggccataaaa aaccggttca caatgaagga a 341

<210> 1620  
 <211> 201  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-010-Q1-E1-F6  
  
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 gctgccgtcg cggtcctggc cgcgcgcccg gcgtctgcag gcgggggagc cgcggcggtg 120  
 gcggagatct gcatgaagac tccgtcccc cacctgtgaa ccaggaccga ggggaagcat 180  
 gccaacaggt acaaggtggt g 201

<210> 1621  
 <211> 379  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-010-Q1-E1-G12  
  
 <400> 1621  
  
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 gcctcgattc cggcgacgac ctteggcgtc atcttatccg tctcttctg tgccgcggct 180  
 ggcaccgccc tcgacagcga cctccccgac tacgtcatct atcgccgcgt ctattgcgac 240  
 acctgccgcg ccgggttcgt gaccagtgtc accgagtaca tcgcggggcg taaagtgcg 300  
 ctggagtgcg ggcacttctg caccggcaat ctcgagcgct ccaacgacgg ggtgaccgac 360  
 gggatcggca cgtacacga 379

<210> 1622  
 <211> 200  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-010-Q1-E1-G6  
  
 <400> 1622  
  
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 attgggacca catggagggc 200

<210> 1623  
 <211> 423  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-010-Q1-E1-D9  
 <400> 1623

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 tcgtctctgt cctcgtctca gccgctgcca gtgcgcggac cgtgggggac accgtgcagg 180  
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 gagaggcaca cggcgacgcc gcgcacgctg gcggcgctgt tcgtggcgat cccggccgag 300  
 aagggatgcg ggatggggat cttcgtgcac cggcacgtgc agcgacaggg aggacagga 360  
 catagtcagg tgccacgaca gcggcgctg acacgtggag gaggccgtcg gccaggtgag 420  
 cgg 423

<210> 1624  
 <211> 373  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-010-Q1-E1-E2  
 <400> 1624

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 gtggagctgc atcagcaacc acaagtgcag gtggagctgc agcagccgca accacatcaa 180  
 caagcatcac ctgttatgcg cagaggagca tctattgctg ctgggcaagc agaaatggca 240  
 cagcaatctc tggagactat acccgttcca tcttcacca agatcaagcg tcaaacaatca 300  
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ggcggtagcc caa

373

<210> 1625

<211> 251

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-E6

<400> 1625

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gcacagcaat ctctggagac tatacccgtt ccatcttcac ccaagattaa gcgtcaaaca 120

tcagggagac ctgggtcggg ggcattccaca aagcctgcag cagctgcatt cacacaaaaa 180

cctggcggta ccccaaagaa aggtgaggtc aaacctgctg tcgaccagt tcaaactcaa 240

gccacaagtg c 251

<210> 1626

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-B2

<400> 1626

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tgccatctac cacaagacat gttcatgtg cagccactgc acatgggtcc tcgcgatgtg 180

cagctactcc tccatggagc cgtgtgcctg tactgcatga gccacatcga gcagctcttc 240

aaggagatcg ggagcttctc acatgaactt cagccacgt ggcacgtcat cagacaatgg 300

tgaactgaca agggcgtcaa gcaagctgtc gtctgcattt tctggtagcc aggataagtg 360

cgcagcatgc cagaaaacag tgtaccgc 389

<210> 1627

<211> 267

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-B4

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cgcaggcggt attggagttg gtgcctgctg atgatattat cgccgccgca gctgctggaa 180  
cggcggtgga cgatggcgag ccgcctcagc agtgcgcgac cccggtgaac gttgaggatg 240  
cgtgccgcgg cgcgttcgag acgcacg 267

<210> 1628

<211> 72

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-B5

<400> 1628

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gtccactccg gc 72

<210> 1629

<211> 181

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-C4

<400> 1629

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attcgataaa tgaagcagca gaactgtttg aggaagctag aacagttctg gaacaagaat 120  
acgggcctta tcatccagat actttaggag tgtacagtaa tcttgctgga acttatgatg 180  
c 181

<210> 1630

<211> 390

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-H5

<400> 1630

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 atctccttgg ccgtagcgcc cgtgatcgtc ctgatctgtg ccgtagcttc cgcaccgcag 180  
 acacctcggc gccgtacatg acatgcctgc cgggcttgca gaactattcg tcaacgttgc 240  
 ggggctgccc tgagcacaca agagctctct ctccgacggt aacgcactcg attatgtcac 300  
 gcagccggag caggcagctg ggacatgcac gtctcctgca ggagccgcat tttagcctgg 360  
 cccgccgtat caccacactt gacctccgcc 390

<210> 1631  
 <211> 295  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-H7

<400> 1631

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 cgctgttttc tgetgcatcg tctgctcac ggcggacgtc tccgtgctct ccacgtgtgc 180  
 acgcgcacgc tgcgatgtgc tgcaaggccg cccgcttgcg cacagtccac aggcaactctg 240  
 cctcggtcgg tcacgggagg gggatatagt aactcgtcta ggaccacaca ggcgt 295

<210> 1632  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-H8

<400> 1632

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 aatacccagt cgtgcccgcg cgcggagcgg atcattgcgg aggtgatgca gacgaagcag 180  
 atggcgaacc cgacgacggc cgcgggcctg ctccgcgtct tcttcacga ctgcttcgtc 240  
 agcgggtgcg acgcgtcggg gctgatcgcg tccaccagt tccagaagtc ggagcagcag 300

gcggagatca accactccct ccccggggac gc 332

<210> 1633  
<211> 182  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-A2

<400> 1633

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tgtgcagtc tgggtgtctg tgcacgatg cctactacgc ttgacgggat atcaccaact 120  
gacgtacca tctccacacg taacgttga cctaacacca tctagtatcc acattgaggt 180  
tg 182

<210> 1634  
<211> 138  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-A4

<400> 1634

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catgggcacc atagccagga cctcggctca caaaaaggtc ctccgattct caaaggccgt 120  
tttgtcggc atcacgta 138

<210> 1635  
<211> 63  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-A7

<400> 1635

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ggc 63

<210> 1636  
<211> 441



<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-A9

<400> 1636

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 tgccggagag ctctgaggac tgcactttcg agtggctcta ctggcctcag tgccgggagc 180  
 ccttcagcga cgagacggtg gagtacgtgc ggtccctgga cgcggaggag gacgtgacta 240  
 tgctgaggct ccacgggtgg gaggtgtcgc gcgagtgcgc gcgcacgctg cgcgtcgcca 300  
 ccatgtgtgt gaagaagggg gtggagaggg gcctcaccgc ctccacatc gggagcatca 360  
 tgtgcagaga gacctgacc aaggagtccg ccatcgaaga gatcgtccgt gaggcggcgg 420  
 aacggggagg aggatgag a 441

<210> 1637  
 <211> 417  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-G10

<400> 1637

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 gttgtgtctc acgatgacga cactgcttgg ggtgactacg ccagagcaac tcttagatgc 180  
 atccctgcgg attacagcgg tgaaggcagc gatggcggag atgaagctag acaatgcaat 240  
 aaaatcaggc agtgctcagg gtaaccgat gatgtcgtcg ctaaagacat gcaaggagag 300  
 ctacgcgtcg ctggtagact ccatcaatac cacgcggaac acgctcaaaa ggcggcggcag 360  
 caatgcagac ctcatgtcgg agctatccgc ggcggacacc ttgccaccg actgcgg 417

<210> 1638  
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 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-009-Q1-E1-G11

<400> 1638

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gctggagccg agccggggcg ggggccgcga cggcagcctg gtggactggg cgcgggcccat 120  
ccttatccgg cccaaaaagt tggagcggat cctggaccgg cggatgggag aggtctgctc 180  
ggagatgggc ctgcagcgcg tggcccgccct cgcgtacgac tgccctcagcc agaaccctcaa 240  
ggtcggggcc tccatggcca gggtcgtcac cacgctcgag gcagtcctcg ccgcccgtgc 300  
cggtgccgcc gacgccccgc cgcggtgaga ccggaggttg atgtangtag tanggtcggc 360  
atacggatta attaggtgcg tacgggtata tgcttgggag gaggaggcat gtttaatt 418

<210> 1639

<211> 403

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-009-Q1-E1-G12

<400> 1639

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aaggaggctg aaatgcaaat tgggttcccg acggatgtaa aacacgtggc acatattggg 180  
tgggatgggc ctgggtccac gaacaacaac aacaataaca acagcaacaa caatagtggc 240  
ggagcaccta gctggatgaa ggattaccac tcggcaccgc ttgactcgtc ctcttttagg 300  
agtgagagtg ggggcacggc tgctgcaaat cnctgngctt ctcaagagat agtcatggat 360  
ggagcaagcg tcggagaaac ctcttcaag gacacgaaaa gcg 403

<210> 1640

<211> 98

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-G4

<400> 1640

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gcatggatga attagtcgtt tcggcgacga tcaactgcc

98

<210> 1641

<211> 144

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-G6

<400> 1641

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ttccgtcacg cccaccgcg cgcgcgcatt caggaggggc aatgcagcag atgcctgcg 120

ccgtccacga caccgcctca gcgg 144

<210> 1642

<211> 429

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-009-Q1-E1-G8

<400> 1642

caccctccc ctgcgtcacc ccaccatata cgccagccc aacgaaaatg tcgcgcgcca 60

cagctgcggt cctctttctac atcctcgccg tcgctgccct cagcgcggcc gaggcaccgg 120

cagagtcacc gaaggcaggc agtcttgcca aggcaccggc cgagtcaccg aaggcaggca 180

gtctgcagc tcttgccaag gcaccgagt ctgctgccac gagaactgcc cccgctaagg 240

cacctcaagc cgctccaacc cccgcgcgtg ccgctgcccc atcgtcgtcg tcgtctaaga 300

agtctggtcc agctgcgcg cgcaccaccg ccgcctctac accgtcttct tccacggacg 360

aagagtttga gccttcgccc tcggcatcca acgccgaggt ggcgtcncct gccgctgatg 420

ggcctgctg 429

<210> 1643

<211> 337

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-H10

<400> 1643

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ctcccccgac cgccgttcat gctcctgtct ggctggctcg ctggccgcct caacgggaac 120

gctgccgtag aatgacgact ggggctggtg ttgttgttac agtatggtcc ttttttcttt 180

cttctttccc ctttcatcca ttaagctctg tgatgtagcc gcccgtagtg ttgattcatg 240

aaatcatgcg agagattttt tcctggaagt aattgcgtgc ctgttacact gtcgaaccta 300

tttggaccaa agttgtacac cgcagtatga tgttacc 337

<210> 1644

<211> 395

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-H11

<400> 1644

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caagcaatct aggctcagca tgattcacia cgcaatgcag gagacgcccc ccatcagcat 120

cgacggccac gacatcatac tcctggacct ggagggtcga tataacctgc acgacgtgta 180

ctactcgctg aacgtgcacg tctgccactg catcgccctc ctgtactacg acgactaccc 240

gcccggttac tacaacatgg tgtccaccac cctgttcacg gacaacgcca agtccgcctc 300

cgccgtcatc cgctactcca ggcgcagccg caccgcgccg gcgaccaaca tgaacaagcc 360

atcggacagg ctggccatcg ccatcaacca cacca 395

<210> 1645

<211> 234

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-H12

<400> 1645

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gcacaggcgc tgccgtcggg gtttagagtca ccgcatgttt acattcgtca tgacccttc 120

gttcagtacg cctctgtgcc atgcatgcac atagatcatg ctactgaag tctacagtt 180

tgccatatct cgttacgtac actacgcttc tttatcccct cctccctttt tttt 234

<210> 1646  
<211> 394  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-F8

<400> 1646

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cgctcatcc ccagactcgt catcggaggc gccctctagc agcagttcct ccgactagac 180  
gcaaaaacct cttcattctc tggaataact aacagtatat acgttgcacc ctgatgatat 240  
agaaacatgt acgtgcatca gtgtatggaa tgcgagtggc aaacacatgg aatgtgcttg 300  
cctaattatt gtttatttct ttatttatta tatgtctctc tcgtttgttt tttatttttc 360  
ttaatgcaag ttatataatt tgttataccc aata 394

<210> 1647  
<211> 73  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-E5

<400> 1647

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cgggcggtgg ttc 73

<210> 1648  
<211> 361  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-E8

<400> 1648

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gcaacagcag cccgagtacc cggaacaagc ggacctggaa gacgtgctgc ggacggtggg 120

aacgttccccg cccatcgtct tcgccggcga ggcgcgcacc ctcgaggagc gcctcgcgga 180  
ggccgcccgtc ggccggggcct tcctcctcca gggcggcgac tgcgccgaga gcttcaagga 240  
gttcaacgcc aacaacatca gggacacctt ccgcgtcctc ctgcaaagtgt ccgttgtgtct 300  
catgttcgga ggccagatgc ctgtcgtcaa ggtgggaaga atggcaagtc agtttgcgaa 360  
g 361

<210> 1649  
<211> 402  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-009-Q1-E1-F11  
<400> 1649

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gctagctcgc caccaacaat ggcctcaagg tactctatcc tgcttgccac aacgacactg 120  
gctatgttgt tcgcattcgg ttcgtgcacc acccactca ccttccaggt cggcaagggc 180  
tccaagcctg gccacctggt tctcaccct aacattgcca ccatctctga cgtggagatc 240  
aaggagcatg gcggcgacga tttctccttt aactcaagg agggcccagc tggcacttgg 300  
acgctcgaca ccaaggcccc gctcaagtac cccctctgca tccgctttgc taccaagtct 360  
ggcggctacc gtatcgccga tgatgtcatc cccgccgatt tc 402

<210> 1650  
<211> 239  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-009-Q1-E1-F12  
<400> 1650

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cagggggggag gggaaaacac gtgcattcac ccggcggcaa taatggcctc ggttcgggct 120  
ccggcgacga cgaccgcgc cgtaatccta tgcttatgcg tcgtcctctc ctgtgccgcg 180  
gctgacgacc ccaacctccc cgactacgtc atccagggcc gcgtgtactg cgacacctg 239

<210> 1651

<211> 254  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-009-Q1-E1-D2  
  
 <400> 1651  
  
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 aaccctacag acatgtgtag atgattgcga cgatcgtcac ctccactcta ccccatgtcc 180  
 tcatttaggc tacagcagtg tcggccacca ctgacgacgc agccgacggc gatctaact 240  
 cgtccgagtc atct 254

<210> 1652  
 <211> 410  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-009-Q1-E1-E11  
  
 <400> 1652  
  
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 ggccacgcgc ctggcgctccg ccgcctgcgc gggcgagaag ttcccggcgg ggcgtgcgta 180  
 cgcgtcgtgc gaggacctgc cgaagctggg cgcgtcgtcg cactggacgt acgacgcgtc 240  
 caagagctcc ctgtcggtgg cgttcgtggc ggcgcccgcg gcggcgggcg gatgggtggc 300  
 gtggggcctg aacccgacgg gcgacggcat ggccggcgcg caggcgctgg tggcgctggc 360  
 gggggccggg gccgcagcgc ccgcgtgcg gacctacaac attcacgggt 410

<210> 1653  
 <211> 419  
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 <223> Clone ID: LIB148-009-Q1-E1-B1  
  
 <400> 1653  
  
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cgaggaagaa gagatcaatg gcggtccgagc agggagtcgt gatcgcggtgc cacagcaagg 120  
 ctgagttcga cgccccacatg accaaggccc aggaagccgg caagctggtg gtcacgcact 180  
 tcaactgccgc ctggtgcggt ccatgccgcg ccatcgcccc actgttcgtc gaacacgcca 240  
 agaagtccac tcaggtcgtc ttcctgaagg tggacgtgga cgaagtgaag gaagtcaccg 300  
 cggcctacga ggtcgaggcg atgccgacct tccacttcgt caagaacggc aagacggtcg 360  
 cgaccatcgt gggtgccaag aaggaccagc tcttgcccct gatcgaaaag catgccgcg 419

<210> 1654  
 <211> 404  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-009-Q1-E1-B12

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 aatccgatcc cacagaaact tttctctcgg tccgttcgat cgatcgctgc cgtgtcgttt 180  
 gccagacacc atcagcacc cccaaaccatgg cctgcaacct ggctcagtgc gccaccgccc 240  
 ccgcggcgac cgtcgcgccc cgcacccctc gccctgctgc gtccgcgtcc gtctccttct 300  
 ccgcgaggaa gccggcgggc ggcagcctgc ggctgcagcg gcaggcgtgc tgcgagccgt 360  
 cgggtggcgcc gtcggggcg gtgttcgcct gccggggcgc ggcg 404

<210> 1655  
 <211> 409  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-009-Q1-E1-B6

<400> 1655  
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 aggcggcgcg accggggcgc ggcaaggagc tggaggaggt cgaggacgcg ctgctcgcca 180  
 tgcacatcaa ccgggagagg gcggacacct ccgccgacga tctcggcgac ctcgacctcg 240



ccatcgaagg cgagtatcgc gacttccccg gcgagcacgt cacgatccct gccgggtact 300  
cacgcgtcgt ggaacacctc gtcgcggcgc ttccgccgga taccgttcgc ctcgccacc 360  
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<210> 1656  
<211> 211  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-009-Q1-E1-C10  
<400> 1656

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tcgtcatcga ttcaggttct gacatgcata t 211

<210> 1657  
<211> 259  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
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<400> 1657

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tggcaagtca tcagacaagg gtgaactgac atggggccca ggcaagctgt cgtctgcatt 180  
ttctggtacc caggataagt gcgcagcatg ccagaaaaca gtgtaccgcg tggagaagtt 240  
aactctggaa ggcgagtcc 259

<210> 1658  
<211> 426  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-008-Q1-E1-H6  
<400> 1658

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 tcaccatgga tgacgtcaac gtcgagtata gcggcaccaa caacaagacc atggctatat 300  
 gcacgaacgc caagggcagc accaaggggt gcctcaagga gcttgcacgc ttctagaccc 360  
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 gatgct 426

<210> 1659  
 <211> 161  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-008-Q1-E1-H7  
  
 <400> 1659

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 gtttgagtag cgctcgtggc acctgcagtg ccacctcaag t 161

<210> 1660  
 <211> 432  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-008-Q1-E1-H8  
  
 <400> 1660

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 acgaacaatc catggctcca tctccgcctc ggcgtgctgc gctcctctc gccacgggtgc 180  
 ttctgctggc ggccggccggg tccacccccg gcgccacggc tgctggcacc ttccaggtgc 240  
 gccgaagtt caccgccggg gtgggagggg gtgctggcgc caacatcagc gcccttcgcg 300

cccacgatgg caccgcgtcac ggccgcctcc tcgcagccgc cgacctccct cttggcgggc 360  
tcggcctccc cactgacact ggctcttatt acacggagat caagctcggg acgccacca 420  
agcactacta cg 432

<210> 1661  
<211> 363  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-009-Q1-E1-A11  
<400> 1661

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cgctgggtgat agacatcttg aacaaagggg aggtgtcctg ggtcatactg cgcaacacca 180  
caatcttcca caagatcatg ttatagtgca acgacgatat gatgatcgac gtgatcgtca 240  
tgggcgcccc ggacaacccc aacaccgatg gcatccacat aggcgactca tcagggatga 300  
ttatcatcaa caccatcatt ggtgtcgtcg acgactgcat catcatcagc gccgggagga 360  
cca 363

<210> 1662  
<211> 291  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-009-Q1-E1-A12  
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gccaggetca tcatcttccct cctgctcgcc gccggacctt ccctcgccga gtcagaggcg 120  
gaactcgctc ggggcgcgctc agaagcgtga cgggacgctc agcagcattt cctgccgcgc 180  
ccgctcatca tcgagctccc gtcggcgcgcg gccggggccg agctcgacgc ctaagccgac 240  
ggcgacgccg tggtaacagt cgacgtacgc tgcgccagct ggcagctcgc g 291

<210> 1663  
<211> 275  
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-A3

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gccccggccc cgcgcgggtca cagcaagccg ggacatggcg cgcggctgta tcgcccgcct 180

actcgccacg ctctctctct tctctctgct cgccacgccc ctgcagacg gcgcttcgca 240

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<210> 1664

<211> 378

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-A6

<400> 1664

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atctgcacct gcaagcatgg caattacttc tgacaagatc tgcgccatgg cggcaaccac 120

cacggggatg cagatgatgc aggcggcgcc cttgctcctg tgccctggctc tgttggcagc 180

atctacgcgg gtgcgcgtgg gcaactgccg cgaccactgc atggctgcat gcaacggctg 240

gaccatcgtc tgccagctct cctgtaccag cgcattgctac ggagaactcg ggatcagatg 300

cttacgtacg tcggctgtat tagctatagc ataatgcgcc tgcattcagca ccacatgcaa 360

tacactagcg aagcgccg 378

<210> 1665

<211> 439

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G12

<400> 1665

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agctcggcct cggcgtcgtg gaggactggc gccctggctc catcgacgcc aaggaccagg 120

aggtcgccgg gtacgtgac gagtacaagg gcgtggtgtt cgcgacgggtg cgcgggtccg 180  
ggcacatggt accgatcgac cagccggggcc gcggcttcgc tctcttctcg tccttcatca 240  
aggggcagcc gctccccaag gccgcgccga tggtcgacgg atgaagagcc acggtcggtg 300  
ggattccgga gtttcaccct tgtctcgtca agtcaccatg catattgtct ccatttccac 360  
gttaactacc agaccgtgta catactgact aaacgctcga tctgtgacct caactgttgt 420  
atgaatgttt cgctgcagt 439

<210> 1666  
<211> 291  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-008-Q1-E1-G3

<400> 1666  
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cttccaccag tgcggcggca acgtcggcga ctccgtcagc atcncgctgc cgcgggtgggc 120  
cgcggaggag atggagaggg accaggacct ctgctacacc gaccagtggg gccgccgcaa 180  
ctacgagtac gtctcgtctg gctgcgacgc catgncgtc ctznaaggac gcacgcccgt 240  
cgagtgttac accgacttca tgcgcgcgtt ccgcgaacac ttgcgcgact a 291

<210> 1667  
<211> 435  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G8

<400> 1667  
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gccgtgctag cggtagccgc cgatgtcgcc aacgccggcc acgccaagcc cctgacgcct 120  
ggcgggcgtg tggtagacga caaccacggc aagttcacgg ccggggccgtg gaaacccgcc 180  
cacgcgacct tctacggcgg gcgggacggg tccggcacca cggcggggcg gtgcggggtac 240  
aaggacacgc gcacgcaggg gtacggcgtg cagacgggtg ccgtgagcac ggtgctgttc 300  
ggtgacggca cggcctgcgg cgggtgctac gaggtgcggt gcgtggacag ccctagcggg 360

tgcaagcccg acgcggcggc actggtggtg acggtgaccg acctgtgccc gcccaaggac 420  
cagtggtgca agcca 435

<210> 1668  
<211> 343  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-H1

<400> 1668

aatcatctca tggtgaagg agcttgggca aaaaacgccg tacaaatgga gggagctctt 60  
cgcggtgaaa aaagagaaac agcacgaaat tgaggataag atgcttgaca aattcacaaa 120  
taagtttcaa gcatagagag ctgaaaaacc actgcaagca aatcaaacta tgtacaaagg 180  
tgctccaag cagcaaaagg agtttctttg gaggaaagtg gacctagcac tgtatccagt 240  
tccaactaca agagcactat actgaagaat gctacgatac atgttaacaa tcaatcaaca 300  
ttgcagtctg ctatgcaaaa gaatactttt gcgacgtcat ctc 343

<210> 1669  
<211> 416  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-008-Q1-E1-H10

<400> 1669

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ggccaagctc gtcaaggctc tcgcagcgcg gccgtactct gtgtccatca tggagatcag 120  
cgagcccatt ttgccggccg cgttgccctc ccccgctcgcg gcgcccggcc gccgcggcaa 180  
gggtggtaag cgcaagatca agccatcagc ggcaacccat gaggattcca acatgatccc 240  
gcgcaagccc gtcgaagcag tgggtggtggg taagggtgtaag gtggccaagg ataccgtgtc 300  
cgagtcacct gctccaagcc ccgccccgt ctcgccccct tagttgcgtg ttgggcgcgcg 360  
ctgcncgccc gccccggcc accatgcgtc gtgtctgcgc gcgcacgcac gcattg 416

<210> 1670

<211> 403  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-008-Q1-E1-H12  
  
 <400> 1670  
  
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 tcttgcccggt ccccatgcc gcgcggtgg cgcgcgcta cgtcgccgctc tccgcgcgca 120  
 gcttcgtgcc gtcctcaacg tgcagctccc ccgaccgagt tccgccgcag cggcggaacg 180  
 gcacgtccgc cgtgctgcgg ctgacgcaca ggcacgggcc gtgcgcccc cgcggggcgt 240  
 cctcgctagc ggccccgtca gtcgctgaca ctctgcgcgc ggaccagcgc cgggcggagt 300  
 acatactgag gaggggtgctg gggcgcgcg ctcagctgtg ggactccaag gcggcggcga 360  
 cggtgccggc gagctggggg tacgacatcg gcacgtcaa cta 403

<210> 1671  
 <211> 201  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-008-Q1-E1-E3  
  
 <400> 1671  
  
 catccgtggt tgagccatac aacagtgtcc tgtccacca ctctctcctc gagcacactg 60  
 atgttgctgt cctgctcgac aatgaggcca tctatgacat ctgcgcgcgc tcccttgaca 120  
 ttgagcggcc aacctacacc aacctcaaca ggcttgcttc ccacgtcctc tcatccctga 180  
 cggcttcact gaagttctat g 201

<210> 1672  
 <211> 380  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-008-Q1-E1-D10  
  
 <400> 1672  
  
 gacccaagcg tccacagaga ctccatggac gatcaggaga acgagcacga caagcatgct 60  
 gatgctggga ctgacgtcga cgaagaagag gatgacgaag atggccacaa gcgtgtcgctc 120

gttcttggac tccacgtccg cctcaaggaa cagctcaagc ttgacaagga tgatgagagc 180  
ctgatgaggt ggaaggagca gctcctcggg caactcgaca ccgagcagct cggagagact 240  
gcggcgccgg atgtgaaggt gctcaacctg accatcctgt caccggggcg gccagatcta 300  
gtgccatcga tcccgttcga ggtctacgac aatggctatg cgtttacgct caatgatggc 360  
agcctctata gcttccgttt 380

<210> 1673  
<211> 279  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D3

<400> 1673

aactcatcgc ctctccatt tgacaacaat ttaacctccc cgagcgccac atctattagg 60  
tgcagccatg ggtgcctgtg caacgaatcc taagacgctt gatgggaaag cccacactga 120  
ggccaccatc tccacacca aagttgcacc tgagaccact accatccaca ttgacgttgc 180  
ggcaaaacat gcagtaattg agaacgtgga tgacgacaac gatgaggcac caacagtggc 240  
tgcgaaacaa gagccagcag ccaccattga acctcaacc 279

<210> 1674  
<211> 330  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D4

<400> 1674

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ccgcgggtca tgcgggcccc ccaaagtgca gcccgggatc agcatcacca ccaactacaa 120  
cggcaagtgg ctcaccgcca gcgccacatg gtactgtcaa cccaactgtg catgcgctcc 180  
tgacaactgc tgtgcgtgcg ggatcaacaa cgtgaatctg ccagcctaca ccatgatcat 240  
cgcatgcggc aacttcccca tcttcaatga cggcaatggc tgtggctcat gctacgaagt 300  
gagatgcaag gaaaaacctg actgctcggg 330

<210> 1675



<211> 75  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-008-Q1-E1-E1  
  
 <400> 1675  
  
 ttgcctctcg ctggcgctcg gtaactcgct gccttctcg gcttctcttg cgccaggatg 60  
  
 ccttggtccc gttgc 75

<210> 1676  
 <211> 397  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-008-Q1-E1-E2  
  
 <400> 1676  
  
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 ccgactacgt cctccaaggc cgcgtgtact gcgacacctg ccgcgccggg ttcgtgacca 180  
 acgtcaccca atacatcgcg ggcgcccaagg tgaggctgga gttgcagcac ttcgggcacg 240  
 gcaagctcga gcgcgccatc gacgggtgtca ccgacgcgac tgggcactac acgatggagc 300  
 tcaatgacag ccactacgat gacatctgcc aggtggtgct gggtggccac ccgcgcaagg 360  
 actgcgacga ggtccaggcg cttcaggacc gcgcggg 397

<210> 1677  
 <211> 372  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-008-Q1-E1-B3  
  
 <400> 1677  
  
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 ccgagctggc cgtcgccgcg gtcgccgcgc tcgcagggga ggactcacgc aacctctctt 120  
 tccacaagat tgatgtccgt gacaagggat cactggaaat ggtttttgct tctacaacat 180  
 ttgaagctgt cattcacttc gctggattga aagctgtggg tgaaagcata cagaagccat 240

tactttatta tgacgacaac gtcattggca cgataaatct tctagaagtt atgtctgttc 300  
acggttgcaa gaagttggtg ttctcatcat cagctgcagt ttatggatca cccaaaaact 360  
caccctgcac ag 372

<210> 1678  
<211> 340  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-008-Q1-E1-C11  
<400> 1678

gacaccactg acggcgggcgc gtgcgggtac aaaggcgagc tgggggaaaga ctacggcacc 60  
ctgacggcgg ccgtggggccc gtcgctgtac accaacggca ccgggtgcgg cgcgtgctat 120  
gatctcaagg gccccaaagg caccgtggtg gtgacggcca ccaacgaagc cccgccgccg 180  
gtgagcgggc aaaagggcga gcacttcgac ctaccatac cggcgcttct caagatcgcc 240  
gaagagaacg ccggcatcgt gccatcacc taccgcaacg tggcgtgcga aaggaaaggc 300  
ggcatccggt acacgatcac ggggaaacag cactacagcc 340

<210> 1679  
<211> 295  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-008-Q1-E1-C12  
<400> 1679

atgcaagcct ctagcatgac gtcgaggtaa accagcagcc tccaataaaa gccagcacat 60  
ccaaataaaa ccgagagacc tcagccctca ggcaagccga ccgccgacgt accaccgcgc 120  
caacccgaga gaaagatgga gatgatcaag aggatcctca tcgccgcgct cctcgtagtc 180  
gccgtctcgg ccaccgcagt gctggcctcc accgaggccg ccgccgccgg cgccccagcc 240  
gcctccgagt cgtcggcgtc cgccgaagcc cccgctggcg ccgccggcgc cggcg 295

<210> 1680  
<211> 321  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-008-Q1-E1-C3

<400> 1680

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tgctagccct gacgctagtt tgtgccccgc tgatagcaga ggcaaagaag aagagagtcg 120  
ccgccgccgc cgccgaggag aagaagggtgc aggacaactt ctgctcgacg ctgtgcgagg 180  
gcangaaggg gatggacctg gtgggtgtgca aggagtcttg cgacctctca cagcgctcca 240  
acctggtgct gtacggccgg attcagtgcaggaggcaagtg caccgagcag aacggcatca 300  
ccgcgccgca gatgaaagtg t 321

<210> 1681  
<211> 230  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-C4

<400> 1681

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gagaagatta tactggagga cgcgccggca gttcttgctg ataccgctgg cccccccgc 120  
accacggagg tggaggtgga gtccctcagg aaaggagcgg cgccgggttcc agtactcatc 180  
ctcgttggcg ccgcagtgga cgacgtggtg gccgacaacg ttcttggccg 230

<210> 1682  
<211> 350  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H9

<400> 1682

ggcgcgtgcg tgcgttcgtg catccaccgc caccgttctg ggcaccatgt ctttcaccgg 60  
cacgcacgcc acgtgtccgg cgtgcgactg gaccgtccac gtcacgccc tcttcacggc 120  
cgtcggttgc atctaccata tcggatgctt caagtgcagc taatgcatcg gggtcctctc 180  
gatgtgcagg tctcctcca tggacggtgt gctgtactgc acgacctagt tcgatcagct 240  
cttcaaagag actgggacct tctcctacac cttcacgcca tctgccatgt caatagatga 300

cggtgaagtg acatggtgct caaccaatct gtcgtctgca ttttctggtt 350

<210> 1683  
<211> 386  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-008-Q1-E1-A2  
  
<400> 1683

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gttctccac atgaacatgt tacggtgcaa ggacatgctg attaaggact ttaccgttac 120  
ggcgccccggg gacagcccca acacggatgg catccacatt ggcgattcat ccgggatcac 180  
catcaccaac accgtcattt gcgtccagca ctactgcatc tccatcaggc ccgggaactc 240  
caatgtgaac atcaccggcg tgacctgtgg ccctggccac tgtatcagca tcggcagcct 300  
aaggcggtag acngacgaga aggacgtcac agacatcaac gtcaaggatt gcactcttaa 360  
gaagactatg ttcggcggtcc gcatca 386

<210> 1684  
<211> 301  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-008-Q1-E1-A3  
  
<400> 1684

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tgttcggggc ttcgggggtgc cactgccact gtgccaggcc gcgcggtttc gctgtgcgcg 120  
tgctcccctc atcatcttgt caccgaagtc attttttttc tcaactgtctc tttcgtttgt 180  
gcaagaaggg acgagcaaag taccaccgc agcggattac taaattgtct aattacgcag 240  
ttgtcgtgtc gaggttacta aagatgacca caggtaacct atgggtgtcc ccggtcggtc 300  
a 301

<210> 1685  
<211> 455  
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A4

<400> 1685

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ttaataaatt caagaatttg gataaattaa taaatccaaa caacggtggg ttcaaggtgg 120  
accaaccaaa ggccaacggc aatccatcca aaaacccaac ggcaacgctg gtcaggcccc 180  
tttggccctc caatgggggg cgatcacaat ctgcaactgc caaggccgcc ttcaatcggg 240  
aaaaatcccg ttgccggaga agaagtcctt gttcctcaac gccgccagcg cgtcgccccg 300  
ggcactacca gcagcaacaa ggcgggcgct cctcgacaga agcgcccgcc gtgagcgta 360  
cgccgaggac ggccacgaat aagcagcagc tgcacctgcc ggcgagcccc cgggcgtgcc 420  
tctgctcacc aaccgtgcac gccggctcgt tccgg 455

<210> 1686

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A5

<400> 1686

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tccgaccggg caaagatgtc gtggcaggcg tacgtggacg agcacctgat gtgcgagatc 120  
gagggccacc acctcgcggc ggcgggccatc gtcggccacg acggtgccgc ctggggcgag 180  
agcacggcgt tccccgagtt caagaccgag gacatggcca acatcatgaa ggacttcgac 240  
gagccagggc acctcgcgcc gacaggcctg ttctcggac ctaccaggta catggtcac 300  
caaggcgagc ctggtgccgt catccgtggc aagaacggat caggaggcat caccgtgaag 360  
aagacagggc aggcactcgt ggttggcatc tacgacgagc cgatgacgcc tgg 413

<210> 1687

<211> 335

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H4

<400> 1687

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aaaggaaaag gaaagaaaaa aaaccgcgcc gtccgccc aa gaaaaaagc aaagatccgg 120

aaccactgaa ccgcgctacg cgtggtcgtc gtccggagcc acgcgtggcg ccgcggcgat 180

gggcaactgc tgcgtgaccc ggccgttttc tggcaagcgg cgaagcggct ccgcgggtgg 240

cgctggcggg aaccgttgcg ggccgctcgg cggcgccaac gtgcgggtcct gctccacgct 300

gtcctccatc tccgacgagg cgcgcacgc cgca 335

<210> 1688

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-G11

<400> 1688

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tggattgtc agtgacattt gttcttgctt ttggagaggt tataccgcaa gcaatctgta 120

ccagatatgg cctagcagtg ggtgctaact ttgtatggct cgtacgcatt ctcatgggtca 180

tttgctatcc aatttccttac cctattggga aggtcctgga ctgtgctctt gggcacaatg 240

agtctgcact ttttaggcga gctcagttga aagctctagt ttcaatccat ggcaaagagg 300

ctggcaaggg cggagagctt acccatgatg agactacaat cataagtggg gccttggacc 360

tgaccgaaaa gactgctgca gaagctatga cacctattga gtcaactttc tcaactagatg 420

tggattctaa gttg 434

<210> 1689

<211> 425

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-007-Q1-E1-G12

<400> 1689

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ccttcgttct tcctcgtctc gatcccgacg acgctccgtt cggctccggc aaaccacatc 120

aagtcgcgat ggagatgaag aaggtcgcct gcgcgcgcct cgccgcgcgc gcctccgcca 180  
 ccgtgggtcct cgccgccgag gccccggcgc ccgccccccac cagcgcctcc tcggccgcgt 240  
 tccccggcgt cggcgcgcgtg ctgggggcct ccgtgctctc cttcttcgcc tactacctgc 300  
 agtaaaatta aaggaggatc ggagggagag gctgctggct gccattgcct gtaatcggtt 360  
 ggattccgtn tatatatata ttaagtact ttaaattggg tctgaacatg tcaattggat 420  
 cattc 425

<210> 1690  
 <211> 266  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-007-Q1-E1-G6  
 <400> 1690

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 ccgggaacaa gtacttcaac atggtgacga tcaccaacgt gggccgcgcc ggcgacagcc 120  
 cggcagtgtc agtgaagggg accaagcgcg ttaagtggac cgagatgaag cgcaactggg 180  
 ggcaagtgtg gcacaccggg gatgaccgca catgcgagtc gctgaagtcc ccggtgatga 240  
 acagcgacca ccgcagacgc cagcct 266

<210> 1691  
 <211> 430  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-007-Q1-E1-H11  
 <400> 1691

cccgcgcgtc cgaccacgcg accgcgcgtc cttcctgcgg cagaaggaca acatgctggt 60  
 gctgttcgag gaggagtccg ggcggccgga cgcgatcatg atcctgacgg tgaagcgcga 120  
 caacatctgc accttcatct cggagcggaa cccggcgcac atcatgtcgt gggagcgcga 180  
 ggacagccag atcacggcga aggcgaacgc cgacgacctc agggcccggg cggcgtggc 240  
 gtgcccgcgc aagaagctca tccagcaggt ggtgttcgag agctacggaa accccgcggg 300  
 catctgcggc aactacaccg tcggcagctg ccacacgcca cgcgccaagg aggtggtgga 360

gaaggcgtgc ctccgcaagc gcgtctgcac gctgcccggtg ggcgccgacg tctacggcgg 420  
cgacgccaac 430

<210> 1692  
<211> 391  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-007-Q1-E1-H2  
  
<400> 1692

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aaggaaaagg aggagaaccc cgaggaggac gctgcgcccg tcgacgtctc cgcggaaggc 120  
gtgtatgtgc ctctcaagaa ggagaaatcc ggcgaagacg ccacgccggg cgacgtctcc 180  
aacaccaccg gcaaatacgt atcttcttct tccaaggcaa acggcaagcc cacgggaggt 240  
cagcccgcag agagctccac caccgccacc gcggatgcgt acgcgtctcc aaagcagaaa 300  
gtcgtcagca gccagcccat ggccagcgcc gtcctgacg agcttccgct ggccggccaag 360  
agctccaaca cctcggacgc gtacgcattc c 391

<210> 1693  
<211> 145  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-007-Q1-E1-E11  
  
<400> 1693

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gtggccccgg cggcctctcc gggcccttcg gcctctgtgc cggtgggggc gcccgctcgt 120  
tcgcctgcgt gtgtccgggc gggcc 145

<210> 1694  
<211> 393  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-007-Q1-E1-E2  
  
<400> 1694



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tgaaccaatt gactaacatg catatattat gtactagggt tgtgcccgtg cgttgacacg 240  
gaagttaaaa attagtataa aacaaagata cataacgata aatatcacta tgacattcaa 300  
aatccatgtg gcaaaatata actgtaacca tctatgattg tgcattgcga cgccacacaa 360  
attattcgat aaaatattag caattgggaa aaa 393

<210> 1695  
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<213> Zea mays  
<223> unsure at all n locations  
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<400> 1695

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ccgcctgcaa gcggcagcgg aggcngccgg caagcctgag tggggccacg gtgggcccac 180  
cgacgctggc ggctacaaca actggccgga ggacaccgtc ttcttccgcy gcgacaacgg 240  
tgggtggagc accgagtaag ggcacttctt cctgtcgtgg tactcgcaag atgctgctgg 300  
agcacggcga cctcatcctg tcggggcgcca cgtccgtgtt cggcgccgcy cccgtggagg 360  
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tc 422

<210> 1696  
<211> 410  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-007-Q1-E1-E4  
<400> 1696

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ccagctgacc cctttcggtc ggagcctctt catcggcgca gctggcggcg gcgatcatgg 180  
cgtggcgctg ggcgactact tcctcgcccc cagcctcgac gctctggtgc agcagctcgc 240  
cgagaacgac gcgggacggc acgggacgcc gccggccaag aaggaggccg tggaggcaat 300  
gccgaccgtg gaaatcgccg gtggcaatgg caacgatgac gacacggcca gctgccccgt 360  
ctgcctggag gactacgcgg ccggcgagcg cgctcgggag attccctgca 410

<210> 1697

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-E10

<400> 1697

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tcatcaacac ggagtccgtg caccaccaga tcggcgccgg cggcgacatc ttcgccggcg 180  
tgcgcgcgcg ggggggaggg acgacgacgg aggagctgga cgtgcggtac gagctggtga 240  
gcgacggctt cccgctgggc ttcgaccggt cgctgaacca cgaccagttc atggagggcg 300  
tcctgcacgt gccccgggcc cacgtcgagg acctcctccg ccgccgcggt ctcgtggacc 360  
cggccaccac gtgcctcgtc gtcgacaccg tcctcgtgtg gccggccacg 410

<210> 1698

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-D11

<400> 1698

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gccccagctg aggccgcggt ctccacaccc aaggttgcg cccaggccac tccaatctcc 180  
gttgaggttg cggctgatga acaggtagct gagaaggtgg tgggtggagga gccggctgcg 240

gcggccgacg ttgagcatca gaaggctaata gaggtggtcg ctccagagggc ggccgtcgcc 300  
gagcccgatc acaaggagga ggaagccgtg gagaagaccg tcgtcgagga ggagaagcca 360  
gcggcagccg ccaatgcaga ggaaaaggtc gccaacgccg ccgagaacac gacga 415

<210> 1699

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-D12

<400> 1699

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tcgcctccgt tccattccgt cccgccctcc accgccgccg ccgcattcag ggatggagat 120  
gaagaagatc gcctgcgccg tctctgctgc cgcttcggcg gccaccgtgg cgctcgccgc 180  
ggaggctccg gctccggccc ccaccagcgg ctctccgccg gtcgcgcccg ccgtcgggcg 240  
cgccctcggg gccgcgctcg cctccttctt cgctactac attcagttag ccggccgggg 300  
cgcccgaggg ccgaggaaga gaccaacggg agagagagtg acatggctgc gcgcattccg 360  
atgcgtgggc atgttttttg attcgacaca cttttttgtc ccccttttct tt 412

<210> 1700

<211> 373

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-007-Q1-E1-D3

<400> 1700

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gaggacgaga caggatgtc ggggttcaggc agatgccgtg gtcgtcgccg caggagcagg 180  
agcaagcgcc gtcggagcag ctgtgcgagg ggggtgcngc cgtcgtggcg gcgcgccagg 240  
ggatggagaa gccgctgacg gctgtggcg aggcgttcga ggagctggcg cgcggcatgg 300  
aggccgatgg cggggagctc cgctcgtc cttcagcga ctctgcgt ctcgtctccg 360  
tgctcttcag cag 373

<210> 1701  
 <211> 442  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-D4

<400> 1701

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 cgccctggcg tccgcgctcc ttggtgcggc gccggccgcc gcgaacgcgc ccggcggggc 180  
 gttcagcaac tgggtggcga tgaaccagca gagctacgcg ctgtacgcgc agaagtcctg 240  
 cggggacggg ggcaaggagc ccctggacaa gaagctgtcg gaggcggaga agaagaaggt 300  
 cacgtacgtg gtggacccca gcggcaaggc cgactacacc aacatcaccg cggcgctgga 360  
 ggatatcccg gtgagcaaca ccaagcgctg gatcctggat ctcaagcccg gcgctcagtt 420  
 ccgcgagaag ctgttcctga ac 442

<210> 1702  
 <211> 113  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-B4

<400> 1702

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<210> 1703  
 <211> 440  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-B9

<400> 1703

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cggattggta ggccctcttga aagtccgggt ggtgaggggc atcaaccttg cctaccgcga 180  
 cgcaagaggc agcgatccgt atgtcgtcct acgacttggc aagaagaaac ttaagacgag 240  
 cgtgaagaag agatctgtga accccatctg gcacgaggag ctaactctga ccgtcacaga 300  
 tcccagccta gctctgaagc tggaggtgtt cgacaaggac acgttcagca gggacgaccc 360  
 gatgggggac gcggagatcg acgtggcgcc gctggtggag gcggcgaacg cgagcccgga 420  
 agcgagcctg aggaacggcg 440

<210> 1704  
 <211> 421  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-007-Q1-E1-C11  
 <400> 1704

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 cgatgacgcc ctgcgccagc gcccgcgggg gctcgtgcag gtccgggagc gggatcaggg 120  
 cccgctgtcg acggggcacc agcacctgca ccaccatcac caccagctgc ggcggtcggc 180  
 ggcgttccca ccccgccgcc cggggccggg gcgcgccct cctcagcgt gcgaaagcga 240  
 cctcaacatc agggagcacc gctcctgcag cgaggtggcc ggcggcaccg cggcgggctg 300  
 cgccgctgtg tgetgctgct tcccctgct catggtggag gtcgcggtgc tcgccacggc 360  
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 t 421

<210> 1705  
 <211> 359  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-007-Q1-E1-C3  
 <400> 1705

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 agaggcggg cccagaagga ccggggcgcc cgagggtcgg cggccccgcc aaagcccgctc 120  
 agcattgacg tgccccgcat acccttcgac gagctcaaga ggatcaccaa caacttcagc 180

gaccgcgccc tcacgggga gggctctac ggccgcgtct acaacgccac gctcagcgac 240  
 ggccgcgccc ccgtcatcaa gaagctcgac aacagcgccct cgcagggacc cgacaccgac 300  
 ttccgcgccc agatcgcgaa tgtccccaag ctgaagaacg agtatttctt ggagctcct 359

<210> 1706  
 <211> 340  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-007-Q1-E1-C4  
 <400> 1706

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 cgaggtcggc gccaacggga ggaagatggt gtgggagggc accccaagga gcgtccgcga 180  
 cagccaccgc aaggtgaggg acagccacga cggcctcatc atccagagga acatggcgct 240  
 cttcttctcc ggcggggacc ggaaggagct caagctcagg atcaccggac ggatctggaa 300  
 agagcagcag acaccagacg gcgcatgtac tccaaatctg 340

<210> 1707  
 <211> 416  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-007-Q1-E1-B10  
 <400> 1707

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 tctgatggcc ctgcagcccg tcctttcttc ctagtgccca gctttattgc agatccagcc 180  
 ctctgatcct cgtcttcttt cacctctcca acatgaaggt caacaccaag atcaagctgg 240  
 agccggtcat ggccgcgtcg tcgtccctgc cgcggagcgc cagcgagcta cccgaccgc 300  
 cgtcaccgtt cagctccaac acggcgacc acccgtctc cgtgcccacc acacctaggt 360  
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<210> 1708  
 <211> 221  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-006-Q1-E1-H3  
  
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<210> 1709  
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 <213> Zea mays  
  
 <223> Clone ID: LIB148-006-Q1-E1-H4  
  
 <400> 1709  
  
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<210> 1710  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-006-Q1-E1-H6  
  
 <400> 1710  
  
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 ctcggtagat tactatattt gtaccagagg gtcaagggtg tcggtactgt acatacatgg 360  
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<210> 1711  
<211> 279  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-H8

<400> 1711

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gcggccacgc tggcgctggc ccacggcgcg caaggaggag gaccatcggc atcgggcgcg 180  
gtcctggaca aggtcacgga cgagaccttc gtggacatcc agatcgactg caagcctgca 240  
tgccggatcg tgctgggact gtttggggac accgttcct 279

<210> 1712  
<211> 413  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-A10

<400> 1712

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ctcgtaggat cggagccaaa gctttcagac atgggagtag atatgcaaag ggcacgtctc 180  
ggtgtaaagc ttggacatct ttctcttata ttagcgtagt gaatatttcc gaacatactt 240  
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gctactgtag tagtatgcat gtcactagta aaagctggta agctgtgcga tggactgatg 360  
gtgtagactt gtgcagttgt gctctcataa tgggtgggcat cagatcctgt aaa 413

<210> 1713  
<211> 414  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-A2

<400> 1713



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<210> 1714  
 <211> 379  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-007-Q1-E1-A3  
 <400> 1714

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 gacgaccgcc gccgtcatcc tatgcctatg cgtcgtcctc tctgtgccc cggctgacga 180  
 cccgaacctc cccgactacg tcatccaagg ccgctgttac tgcgacacct gccgcgccgg 240  
 gttcgtgacc aacgtcaccg agtacatcgc gggcgccaag gtgaagctgg agtgcaagca 300  
 ctccggcacc ggcaagctcc agcgcgccat cgacggggtc accgacgcga ccggcaccta 360  
 cagcatcgag ctcaaggac 379

<210> 1715  
 <211> 412  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-007-Q1-E1-A5  
 <400> 1715

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 cctccagtag cccttccact cgcagagaag cgcggggcgt tcagcctctt caaggcgatg 360  
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<210> 1716  
 <211> 294  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-007-Q1-E1-B1  
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 gctcagcgcc gtgatcgga acatggagac gtgcatcgaa gggttccccg atgaagagtt 120  
 caagaccaag gtgaacgagt cgttcaccga ggggaaagag ctcagcaaaa acaccctggc 180  
 gtcacgcgag aaggggtcgt cgcgcctctc cgcactcagg ggcgtctcaa aacggcgttt 240  
 gctggaggac gagaagggat tgcggccgtg gccgcggcct cccaagccgg ggcg 294

<210> 1717  
 <211> 66  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-006-Q1-E1-H12  
 <400> 1717

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 acttcc 66

<210> 1718  
 <211> 433  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-006-Q1-E1-G3  
 <400> 1718

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ggctccgaca cctacgaacc tccaaagcaa tcctgggggg ccaaccggaa ggaaggcaac 120  
 cacaagccga ttaaaggaac caacaacgtt caactcacia ccaaggaagg actaagacgt 180  
 ctacgacgat gtcacccccg ccggctggaa gcccaacact gcctacaccg ccaaataaac 240  
 taaccaataa ataataagta tcaaatggca cacttgatag acctttatatt tttatttttt 300  
 atttaataaa aggatataag gagtgtgaca aacaacaaca cgaatattgt attgtctatg 360  
 tatctcctat atatgcaatc ccaattttat catggccaca ttttaaaatg gaatatatga 420  
 tatatatatg tac 433

<210> 1719  
 <211> 316  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-006-Q1-E1-G4  
 <400> 1719

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 gtggaccccc agagcgtgcg gttcatggcg cgggagatcc tcacccctccg ccgcctccgt 120  
 ggccacccca acgttgctcg cctcgagggc atcatcacct cccgctcctc tccctccatc 180  
 tacctcgtct tcgagtacct cgagcacgac ctggccggcc tcagctcctc ccccgacatc 240  
 accttcaccg agccccagat caagtgttac atgcgacagc tgctggaagg gctggcgcac 300  
 tgccatgcc cccggg 316

<210> 1720  
 <211> 423  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-006-Q1-E1-H10  
 <400> 1720

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 gatcgttcaa gaaaaatacc agcttaccaa caacagcagc agcaagccca cccgttcgac 120  
 gacatggccc gcctcggcgc cggcgccgtg ttggcgctcc tagtggcggg cgcggcgggtg 180  
 gccgcgttcc tcgcgggtgcc ggctcggcg aagtccgggg agctgagcgc gatgggggttg 240

ctggcggcga agggcggcag cggcgcgggc ccgcagaagt gctcggggcgc ggtggggcgag 300  
 tgcgacgtgg acgagggcgga ggagctcggg ctgagcggcg gcggcctcgg ctccgacgac 360  
 gcggtgcggc ggacgctggc gcagcggaag ccgaccaacc ggtacatcag ctacgcggcg 420  
 ctg 423

<210> 1721  
 <211> 373  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-E2

<400> 1721

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 gccggcgggc ccgagtccaa ggtcttctac ctcaagatga agggtgacta ccacaggtac 180  
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 tacaaagctg ctcaggatat tgctcttgct gatctggctc caacccaccc catcaggctc 300  
 gggcttgctc tcaacttctc agtgttctac tacgagatcc tcaactcccc tgaccgtgct 360  
 tgcaaccttg caa 373

<210> 1722  
 <211> 309  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-006-Q1-E1-E3

<400> 1722

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 tggcggcgtc tacgcgggtc gcgctgggca actgccgca cgactgcatg gctgcatgca 180  
 acggctggac catcgtctgc cagctctcct gtgccagcgc atgctacgga gaagtcggga 240  
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aagcaacac

309

<210> 1723

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-E4

<400> 1723

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acaacttccc tgggtggcccc ggcgggccgc aatgcaaccg gtggccgcca atttcgcaaa 120  
ggccggcaac ccaaaccccc tgacccttgc cgcccccttg gtacacaaca acaacggaaa 180  
tttcacggcc gggccgtgga aacaagccac gccaccttct acggcgggcg ggacgggtcc 240  
ggcaacacgg cgggcgcggt cggttacaag gacacgcgcg cgcaggggta cggcgtgcag 300  
acggtggccg tgagcacggg gttgtttggc gacggcgcgg cctgcggcgg gtgctacgaa 360  
gtgcggtgcg tggacagccc cagcgggtgc aagcccgcgc cggcggcgct ggtggtgacg 420  
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<210> 1724

<211> 369

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-F4

<400> 1724

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agaaaatgcc aaagccatca atggacaaaa tttgaacctt atggccctcc gtcaacctca 180  
aggaataatg caacctgaat tgaagccaga gaattttctc ttcacaacaa gagatgaaag 240  
cgctcctatg aagttgattg actttggtct gtcagatttt attacaccag atgaaaggct 300  
caatgatatt gttggaactg cttaatatgt tgctccagag gttctacaca gatcatacag 360  
tatggaagc 369

<210> 1725

<211> 230  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-006-Q1-E1-C8  
  
 <400> 1725  
  
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 gtagggaaat agtggcctct gattccggca tccggacgac tgattaccgc tcgtcgtaa 180  
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<210> 1726  
 <211> 257  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-006-Q1-E1-D11  
  
 <400> 1726  
  
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 cagagggatc gggagacaca gatgtatacg ggtatggagt gctgtctggg gctgctcaag 180  
 gtgcgggtgg tgcgaggagt tgacctggca atctgcgacc cgctcaccca cagcagcgac 240  
 ccctacgtcg tcctcgc 257

<210> 1727  
 <211> 367  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-006-Q1-E1-D2  
  
 <400> 1727  
  
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 acaaggacaa ctacttgacg gtggaaaaag cgcgctgcgt actgcagagc ctcgttacgy 120  
 gggagttctc ctatgctacc tcacatgcc a gttcttgat gaaggctgat gtgaaccatg 180  
 acggcaaact gtcgctggag gagatgctag acgactacat atccttctac agcaccgtgt 240

atatggatga tcattacgcc agtgaagggtg aagtagatag tgattccccgc gacgagctat 300  
gagcagtttaa gccaggacag gacagcaagt cggaggttct ttactttcaa atacactang 360  
attttgc 367

<210> 1728  
<211> 409  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-006-Q1-E1-D3  
<400> 1728

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tggccttggg cgccttcctt gggcgctcg tcgccggcgg gtcttgcggg ccccaaagg 120  
tgccaccgg ccacaacatc accaccagct acaacggcaa gtggctcacc gctaaggcca 180  
cctggtacgg tcagcccaac ggtgccggcg ctctgacaa cggcggtgcg tgcgggatca 240  
agaacgtgaa cctgccaccc tacagcggca tgacggcgtg cggcaacgtc cccatcttca 300  
aggacggcaa gggctgcggc tcatgctacg aagtgagatg caaggaaaaa cctgagtgtc 360  
cgggcaatcc agtcacggtg tacatcactg acatgaacta cgagcctat 409

<210> 1729  
<211> 394  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-006-Q1-E1-D8  
<400> 1729

cgcacaagtc caggacgtct cagcatcatc ttctgttgca tcagggaaca aattctgcaa 60  
gggtggtgcc tgtgatttct ctgagtccag taactcctcg agagatgcca aggagagatc 120  
cacgtccatg aggaagctta taatcgcagt gatgctttgc atcatattca tgacggtgga 180  
agtggtcggg ggcacaaag caaacagtct tgccatctta actgatgcgg cgcaccttct 240  
ttctgatgtg gcagcatttg ccatatcggt attctctctc tgggctgctg gatgggaagc 300  
aacaccgcag cagtcatatg ggttcttccg gattgagatt cttggtgcct tggctccat 360  
tcaggtcaga tggccacttg ctggcatact ggta 394

<210> 1730  
 <211> 405  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-D9

<400> 1730

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 caccgcgccc gccgtgctgg ccataccga cgcgcggc ggccccggat acctccagga 180  
 ggcggtgaac aagacgtgt tccccaaggt gtgcatgcac gcgctcaagg acaaccaga 240  
 gtgccaggcg gagacggcgg tcacgccgcg ccggctggcc gagctgctcg tgtacgtgtc 300  
 ggccgaggtg ggcataccg tggccgcgtt cgcgcaccac gagctcaacg ccatcaagga 360  
 cgacgacgtc ccgtacaagt gcatcgacac ctgctccgag gacat 405

<210> 1731  
 <211> 381  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B12

<400> 1731

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 ccttggaat cgccgtgcta ggactctgtc acggttgatg tgcagtgtca tgccctgcggg 180  
 gttttggcta tgtctagcgt gcggatgaat gcaagaagag ccttgacctg agcaatccac 240  
 acattgagca cgtcagacgt cgctgtcagt attgaatatt acttgacctg ttgacacttt 300  
 tggcgagatt tgtagatttt acagtatcat ggctaccgta ttactcagta gcacaggtga 360  
 tgttctttgt atatttgtgg t 381

<210> 1732  
 <211> 405  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB148-006-Q1-E1-B3

<400> 1732

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ctacaccgag gcttattgaa aacaaggatga ggcaatgctt cgatccaagg ctcggaaca 120  
aataccctca aaaggctgta gccaaagatgg ctgctgtggc cgccctctgc gtgcaatacg 180  
aaggatgaatt ccgtcccaac atgagcatcg tcgtcaaggc tctgaacccc ttgctgcaca 240  
gccggtcttg caaccgcctt actgcctcgt cggcctccca cgctgccgca gcagcatagc 300  
gatccggact gtgatttccc atcgctgcga caactttggg ttcacgaaaa acgaccgtct 360  
tgtggagcgt tgggtgttgc gtgtcgtgac tgccaacgcc ttggc 405

<210> 1733

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-C3

<400> 1733

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aagaagcgct ccgctacgca aagctcccgc tcaagttgca cggggatgcg gcggaaggac 120  
cggccggacc tcgcaaccgt cgtactgccg gagctcaacc gggttaaggaa cctcggccac 180  
gcgtacgagg caccgatgag cgccgtcggg accaaccagtg gaagtggcga aagtaatgac 240  
caggtcagcg ggagctcgcc gacggcgggt ggttcatgga gaacggcgga gagctagcgg 300  
gtggtacggc gtggccatga gtcagttaga gagcgagctt gtgatgggga gagttccttt 360  
gttggaacgga gag 373

<210> 1734

<211> 108

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B1

<400> 1734

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gtcgtagttg accagcacta gccactgcag acgatgtcgt ggcagacg 108

<210> 1735  
<211> 396  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-006-Q1-E1-A10  
  
<400> 1735

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ccccgccgg agaacgacca cgtgggtgctc atcggagact ggtacaccaa ggaccacgag 120  
gtgctagccc gccagatcga cgccggcaag ggggtgggcc gcccgcggg cgtgctcatc 180  
aacggcaagg gcggcaagga cctggacgcc gcgcctgcct tcaccttcga cgccggcaag 240  
acgtaccgcc tccgcgtctg caacaccggg attaaagcgt cgc tcaactt ccgcatccag 300  
ggccactaca tgaagctggc cgaactggag ggctcccaa acctgcagaa cacgtacgac 360  
tccctcgacg tccacgtcgg ccactgcctc tccgtg 396

<210> 1736  
<211> 370  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-006-Q1-E1-A11  
  
<400> 1736

cggggccgacc cacagcgtcc agccgcatcc gcggcacgcc gcgccgcata ccgtgcccgc 60  
gcaaaaccgg atccgccgcc gccatggcgg tggaccgcgt ggacggcgag gaggcgttcg 120  
aggaggtgga cccgacgggg cggttcgggc ggtacgcgga cgtgctgggg ctccgggtccg 180  
tcaagaaggt gtaccgcggg ttccgaccag aggaggggat cgaggtggcg tggaaccgtg 240  
tccggtctcg gtcgctggcc gaccgcgacc ccggcatggt ggagcgcctc cacgccgagg 300  
tgcgctcct ccgctcgtc agccacgacc acatcatcgg ctccacaag gtgtggctgg 360  
accgcgacgc 370

<210> 1737  
<211> 331

<212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-006-Q1-E1-A4

<400> 1737

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 gattcaagct caaggacagc cacgaggagg acatctgcta ggtggacttg gtggaaagcc 120  
 cgcgcaagga ctgcgaccag gtgcacgcag acagggaccg cgccggcgtc ctgctcacca 180  
 tcaacgtccg catcagcgac aacctgcgcc ccgctaaacc gctcggctac ctcaaggact 240  
 tgccgctgcn catctgcgcc tcgctgctca aacagttgga ctccggacgac gacgacgatc 300  
 agtaatatgca catctacgac gactatcgat a 331

<210> 1738  
 <211> 430  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A9

<400> 1738

gggccgaccc aaacgtccaa tcagcgtggt cagccgcctc ctcatcccg tcccgttcga 60  
 ccagcccccg ccggagaacg accacgtggt gtcatcggga gactggtaca ccaaggacca 120  
 cgaggtgcta gcccgcgaga tcgacgccg caagggcggtg ggccgccccg cgggcggtgct 180  
 catcaacggc aagggcgga aggacctgga ggccgcgcct gccttcacct tcgaggccgg 240  
 caagacgtac cgctcccg tctgcaacac cgggatcaag gcgtcgctca acttcgcat 300  
 ccagggccac tacatgaagc tggtcgagct ggagggctcc cacaccctgc agaacacgta 360  
 cgactcgctc gacgtccacg tcggccactg cctctccgtg ctcgtcgacg ccgaccagaa 420  
 gcccggcgac 430

<210> 1739  
 <211> 247  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F9

<400> 1739

cccaacaagg ccacgatatc cccggcaaatt ccaatacgcc atttaaggac cccccaagg 60  
ccaacatggc caagcaataa gctaaagggtg ggaatttgct ccacaaagtt ttaccaccag 120  
gtgggagata tgccaagaag gagaccaaac cgatcattgt ccagatttcg agcgtactgg 180  
cctactatca cctccaggga ttattccacc ggattttgag ccccggaat ttcccttca 240  
aaacagg 247

<210> 1740

<211> 111

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G10

<400> 1740

cgtaaatatg agttaagttt caggagccgg tagaagggtg ccaccagagt gattgcgaac 60  
ctttgacggg acaccctttc ttcagacaac ccgggccctg ggccttgccg g 111

<210> 1741

<211> 355

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-005-Q1-E1-G11

<400> 1741

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gcatggtgaa ggcctacccc acggtgaacg aggactacct caaggcggtc gacaaggcca 120  
agcgcaagct ccgcggcctc atcgccgana agaattgcgc cccgctcatg ctccgcctcg 180  
catggcactc cgcgggcacc ttcatgttg ccacaaaaac cgggggcccc ttccgcacca 240  
tgaagaaccc cgccgagcag gcgcacggag ccaacgccgg actggaaatt gccatcaggc 300  
tgctagagcc catcaaggag cagttcccca tcctatacta cgctgacttc tacca 355

<210> 1742

<211> 202

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G12

<400> 1742

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gcgcatagca tgaggattgt ggcgctggcc ctgttggccc tgctggtggt ggcggcgggc 120  
gcgcccgtgg ccaccgctga cggctgctac gacgactgct acaagcgctg cgccaacggc 180  
aagaaagacc ccgcctgcac ca 202

<210> 1743

<211> 439

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G2

<400> 1743

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gtcgatcggt caagaaaaat accagcttac caacaacagc agcagcaagc ccaccgcttc 120  
gacgacatgg cccgcctcgg cgcggcgccc gtgttggcgc tcctagtggc ggtcgcggcg 180  
gtggcccggt tcctcggcgt gccggcctcg gcgaagtccg gggagctgag cgcgatgggg 240  
ttgctggcgg cgaagggcgg cagcggcgcg ggcccgcaga agtgctcggg cgcctggggc 300  
gagtgcgacc tggacgacgc ggaggagctc gggctgagcg gcgggggcct ccgctccgac 360  
gacgcggtgc ggtcggagct ggcgcaacgg aagccgacca accggtacat cagctacgcg 420  
gcgctgcgcg cggaccaag 439

<210> 1744

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-H10

<400> 1744

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tttgaggtaa ggtatggctt tcggaagaaa aactgggaga ttgcaagatg ggttgctctt 120  
ggcgttggtg tttttgaggg agtgctcttt ctattagctc tggttgtcac ggcaatgaac 180

aaacctgcgg agtatgacag tgatgatgaa attattgcaa ttggacgaag ccctaccatg 240  
 cggcagccat tgatccatgc ccaaaatgtg ccggccaccg gtgttcctgt cccaacactc 300  
 gatcagcggt caagtagaaa tgatgcctgg agccaaagga tgcgatagat gtatggctctg 360  
 gacacgagcc agttcacgta caaccctca taccca 396

<210> 1745  
 <211> 396  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-005-Q1-E1-H11  
 <400> 1745

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 gcgacggcag aacaccttcg ccggcgagag catggcgatg gcgtaccgtg tcctggaggt 120  
 caccctgggt tcggcaaagt acctcaagaa agtgtcgctc ttctcccgga ctgcgcatcta 180  
 cgccgtgggt tccatctccg gattcgacct ccgcatccct tcccacagca cccaagcaga 240  
 ccacagcaac ggctgcaacc cctgctggaa cgccgtggta cacttcccc tcccggctgc 300  
 cgctgacacc cgcgccctcg cactccacgt gaggtccgc gcccagcgct tatacctggg 360  
 cgatcgcgac atcggcgagg tgtttgtgcc catcga 396

<210> 1746  
 <211> 371  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-005-Q1-E1-H12  
 <400> 1746

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 aattgtggca gaccggggag gacctacat gcgagtcgt gacgttccgg gtgatgacca 120  
 gcgaccaccg caaggccacc tcatggcag ttctccctgc tgactggaag ttcggcgctca 180  
 cgtaccaggc gtccaagaac ttctaagtag ccactttccc tcctcttctt caacctgcat 240  
 gcccgcaagc agccatgcag atgataacat gcatcatgca tgcattattca ttctttcgct 300

catgcactcc gatacgggtgc cggaggttaaa aaaatataaa tcaatgtgca aattcanatg .360  
 acananaaaa a 371

<210> 1747  
 <211> 281  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-005-Q1-E1-E11  
 <400> 1747

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 atgctacaag gtgagatgca aggaaaaacc tgagtgtctg ggcaatccag tcacggtgta 120  
 catcactgac atgaactacg agcctatcgc tccctaccac ttcgacttga gcggaaggc 180  
 ctteggctcc ctggcaaagc ccggggtcaa cgacaagatt cgccactgcg gcatcatgga 240  
 cgtecgagttc aaaaggggtgc gatgcaagta ccccgccggg c 281

<210> 1748  
 <211> 438  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-005-Q1-E1-E2  
 <400> 1748

gggtcgagca cgcgtccgca ccccgctctc gtgcccacca cacctagggt gtccttatcg 60  
 tgctcgctgt tcggccacat ggtgaccccg ccacccgaca caccgccgat cagccccacc 120  
 aagaagcagg acgacaagcc gaagccgacg ccggaggccg ccaccgcggc gaactacgcg 180  
 tcgttggtgt cgcccaagcg cctcatgcag cgcgtgccc gcgctttccg ccgcagcagg 240  
 tcgcgcgccc gcgtcaggac ggtcaaggac ctgcgcgagg aacgggcctc agtgctcgcc 300  
 gccagcaaca aggtctccga tgaagcggcg gcggctaccg cggtgccgcc tgcaggtgcc 360  
 agtgccaaga cctccagcag caacgatgcg cgcgacggcg ccatgggcag cgtccaggac 420  
 gagccgcggc agcagcgc 438

<210> 1749  
 <211> 425  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-E3

<400> 1749

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agcaaaccag caatggcccc cgctgcgtc ttctcgtcg tgctcctcct agccgccgtc 120

gccatggcgc cgttcgcggg cgcggcgcgc atcgacgtcg tcgagggcag gtccatggcg 180

tccgcggacg caccggaggc cgcgcgcgac gctcccgtc ctgctcctgg ccccgactcc 240

ttctcgaccc cgtcgccggc accctccagc agcagctctt ccgactagcc gcccggcaga 300

gatatctacg gcgtccgac agtctttggc gccacctatg acctatcgga ttctgcaaag 360

ctatgtatga ttctatggta taatgtgtgg ttgcccgaac cgcgcggaaa taatgtgctt 420

gcgtg 425

<210> 1750

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F1

<400> 1750

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tggccgtcaa cgacgtcgtc ttcaagaaca tcgacggcac ctccaacacg ccggaggcca 120

tcacgtcaa ctgcgccaac aacctgccct gccagggcgt gcagctcatc aacgtcgaca 180

tcaagtacaa caggtccgac aacaagacca tgtccgtctg caagaacgcc atcggcaagt 240

ccattggcat ggccaaggag ctgcctcgtc tctgaacctt cttgcatcca tcaactcactc 300

ttcgtcaact ctctctttct cactctcgcc agtctttttt taggcctctg gcaatctgctg 360

aactttccta ctcaattccac 380

<210> 1751

<211> 369

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-005-Q1-E1-F10



<400> 1751

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cttgcaagaa caagtcaaca acggaaaagg ccttcaccgg aacaatcgcc tccggggata 120

cgcccaaac cagcctgggg ataacggacg ccttgcctca cttaggctc gcaaccgacg 180

ccaacatcaa caaggccaac ccggaggggg acaaggacaa gatcgcaaaa atccttgctg 240

catacggcaa gacggccgac gcggtcgctg cgccccgct tcccgagaag ctcacagtca 300

tggagaagac cttctcggcg gtcgccgccg ccgctcatca ggangccgca gcagctgctg 360

ctgctgctg 369

<210> 1752

<211> 341

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F12

<400> 1752

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ttcatcctcg ccgacgcggc ggcgccacag gtcggcgcca tcggcatccc gctcattcgc 120

ggtggccata gcaggccagg agcgccggcc aagctcgcgc caccgaagcc gatacctctc 180

aggcacgcgg cgccggcgcc accgaagctg acgcccattg cctcaggcgc ctacatcgctg 240

cggagcctgt gcctgaagac cgactactcc gacctgtgca tgtcggggcat cgcgaagctg 300

ccgcagtcgc agctgccggt cgggaagcgg ctggacagcg c 341

<210> 1753

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-E10

<400> 1753

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ttcaacgtca gattccacaa cgcacgctac cacaagagat ccaccagcgg ccttgagct 240  
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<210> 1754  
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 <212> DNA  
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<223> Clone ID: LIB148-005-Q1-E1-D10

<400> 1754

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 gcatggtgat acaacggcga cctgtgcaaa tcatgaatgt agctgtatgg aggcttttca 240  
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<210> 1755  
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 <212> DNA  
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<223> Clone ID: LIB148-005-Q1-E1-D12

<400> 1755

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 ccaagggttac gcccgaggcc actccaatct ccgttgaggt ttccgctgat gaacaggtag 180  
 cttataaggt ggtcgtggtg g 201

<210> 1756  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D4

<400> 1756

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cgggtggcggg ggccgggaggg gcgccgtcag tgccagcggg tccgctggac atcgcgacg 180  
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acgcatgcga agcgacgggg gtagagaaca tcgtgatccc gtcgggcaag tacctgacgg 300  
tcgggctgga gctgaagggc ccctgcaagt cctccatcat caatcagtct cgaacgcaac 360  
ctgctcggca ccggggacct cagggcggtta cacatgaact ggatcgaga 409

<210> 1757

<211> 281

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D9

<400> 1757

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gtggttcatac gggaggatta cctggtagag gtcagaccac cggcttctcg ctctctcaca 180  
ctagcgtatt ctcggggatg ataaggagag agcgtaacgc catatccaca ccataaggca 240  
tgacgtacag tgaccttctt taagggcatac acggtcggct g 281

<210> 1758

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-B9

<400> 1758

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gctccgctcg cgcateccat ccagcggcg gcagacagag agcagggatc ggccgggtccg 120  
ccgtcgacat ggctcggtag gtggagatgc tggacatggg cgtgcgcata cggcgaggt 180

tccactcgca ctgcccgcag acggcgcgca tgtactacaa gccgccgcag acgcagacgc 240  
 agtcgtcgtc gtggtcctcg gccgacgacg ccaatgccgc gagctccacc cccgacgcgc 300  
 cgtegggtccg gcggcccttc gcgctcgagg cggcggcggc ggccggcggc gatttcgcgc 360  
 ccggcgaccg gtcggggccat catcagctgc acggcttgga caccgcgcaa g 411

<210> 1759  
 <211> 292  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-005-Q1-E1-C10  
 <400> 1759

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 tgaaagctca tcgcgcctg tccgccttgc atcgaccgga gtgaactacg atattcatat 180  
 tcgatcatct tttgtatctt cgacatgagt actatgtaaa tccgtgggtga agacctgagt 240  
 aattagtggg acgccagagc ttgagtgttg attagatgta actgggtggct tc 292

<210> 1760  
 <211> 171  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-005-Q1-E1-C11  
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 tccgatttag gaggaacggc catgcataga gcagagccac acttcgaatg t 171

<210> 1761  
 <211> 423  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-004-Q1-E1-H10  
 <400> 1761

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 atgacctaa cttcttgag cctaacgagg tcattgggac agtcaagaat aaatcatctg 180  
 gggaaacat tgcacatcca cctccatgg ctcattgcat tttagcagt ggagaaagca 240  
 tggtttctga agcggaacct cttctgcaag tgggtggagt tcgcatttgt caggaggaag 300  
 atagtatcaa aaatttagag agtccatgtg cttgcactgg cagtctaaag tatgctcata 360  
 ggacttgtgt acaacgatgg tgcaatgaga aaggagatgt aacatgtgaa atatgtcatg 420  
 agc 423

<210> 1762  
 <211> 416  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-004-Q1-E1-H12  
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 agggacccat caccgtccaa ctcaccaccg agggaggcac taagaccgtc tacgacgatg 180  
 tcatccccgc cggctggaag cccaacactg cctacaccgc caaataaaact aaccaaataa 240  
 taataagtat caaatggcac acttgataga cttttatatt ttatttttta ttttaataaaa 300  
 ggatataagg agtgtgacaa acaacaacac gaatattgta ttgtctatgt atctcctata 360  
 tatgcaatcc caattttatc atggccacat tttaaaatgg aatatatgat atatat 416

<210> 1763  
 <211> 434  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-004-Q1-E1-H2  
 <400> 1763

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tcgtctctct cgtccccgtg cccctccgcy aggagggcgt cgccgcgcgc cggggacgag 180  
acggagcgcy tcttccgcaa gttcgacgcy aacggcgacg gccagatctc gcggtccgag 240  
ctggcgggcgc tgttcgagag cgtggggccac gcggccaccg acgacgaggt gtcgcgcatg 300  
atggaggagg cgcacgcgga cggcgacgcy tacatcagcc tgcccagatt cgcggcgctc 360  
atggactcgg cgtccggcga cgccgacgcc gtcgaggagg acctgcgcca cgccttctcg 420  
gtcttcgacg ccga 434

<210> 1764  
<211> 431  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-004-Q1-E1-H8  
<400> 1764

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atgttatcag tatcacatac aaacaattat tacaggattc acatcaaagc aattcaggta 120  
caaggctaac atcagtacaa caccaaaaga tagattgggc attgcatgaa tcacatgcgt 180  
atgaagaagc cagaagagtg gatagctgtt tgtgatctct tctgtttctc ttctgttcac 240  
ggtgtcacct gcttcagcgc tcttgactg cgggtagaaa gtcttacaga gatgagagct 300  
aaaagggttt caaagtaaac aggttggttc agaaacgctt cacagaaagt ggcgcgcaga 360  
gtagtgtatg tgcagctgac atgtatgtat agttaanagg gaactaactt tcgctcataa 420  
atgtaaaata a 431

<210> 1765  
<211> 393  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-005-Q1-E1-A11  
<400> 1765

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caatacatat atctatctga gccctttccc gcggtgaggg ccgaccggag tccacacaca 120

cacggtgtcg atggcggccg taataaggag ccgccgccgc gtgtccgttt tcttctacgt 180  
 cgtcctcgcc gcagctgcag ctgcagccgc ggcgcaagca tccaataacg tcacctccga 240  
 cgaggagtac tgggcggagc gcgccgaggt ggctcggtcg cgcaacctcg ccgcctacgt 300  
 cagcgacccc gtggccgcca cgaaccgctt caacgcggac gtgctgaggg ccacgacgcg 360  
 gcgggcgctg gcgaagtacg atggcccgtg cat 393

<210> 1766  
 <211> 140  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-A4

<400> 1766

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 cgtgtgcgta ggccggctgg ttcccgataa gggggttgct ggcggtggag gccgcgggcg 120  
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<210> 1767  
 <211> 211  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-004-Q1-E1-G2

<400> 1767

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 cttcgacatc accaagttgg gcgcctccgg caatggcaag acagacagca cgaaggctgt 120  
 gcangangca tgggcatcgg cgtgcggcgg cactgggaag cagacaatcc tcatacccaa 180  
 gggcgacttc cttgtcggac aactcaactt c 211

<210> 1768  
 <211> 418  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-E2

<400> 1768

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 cgtgcctgtg cctcgctctc gccgcggcca cgctggcgct ggcccacggg gcgcaaggag 180  
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 ctaaaacagc agagaacttc cgagcacttt gcacacggga gaaaggaatt gccaaagtccg 360  
 gcaagcctct gtggtacaag gggtcgacgt tccacaggat catcccgggg ttcatgat 418

<210> 1769  
 <211> 444  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-004-Q1-E1-E3  
 <400> 1769

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 acatggcccg gctacaagaa ggtgatcagc aaggaggagg ccgaaaagtt caccgtgcag 180  
 aacttcttgc acgccgagcc gtggctcaag cccaccggga cacctgtcaa gtacggcttc 240  
 tgggcgtgag cacatattct tgtggagacc agaggatgtc gatgaagcag aggaagtcac 300  
 ctatgcctag ttgacctatg catggtggta aatcactaat cgtccattgt tgggagcatg 360  
 ttcattccag gacggacgag ataaggtgct gagttgatat gaccataatc catgtacagt 420  
 gtgtcacctg aacacttggt tgta 444

<210> 1770  
 <211> 135  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-004-Q1-E1-E6  
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tcgcttccgt cgcgttggtg gtgtcggctg ctgggctcgt ctctgtcttc cttgcgtctg 120  
 cttcttcctc cttcc 135

<210> 1771  
 <211> 238  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-F12

<400> 1771

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 tctccggcat cctccggggt tgtgccggct gcgagggctg ctgacgccct gcgccaacgc 180  
 ccgcgggggtc tcgtgcaggt gtcgtagcgg gaccagggct cgttgtcgac tgagcacc 238

<210> 1772  
 <211> 415  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-F3

<400> 1772

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 atccgtatgt cgtcctacgg cttggcaaga agaaactgaa gacaagcgtg aagaagagat 180  
 ccgtgaaccc catatggcaa gaggagctaa ctctgaccgt cacagatccc agccaaccac 240  
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 aggtggacgt ggcgccactg atggaggcgg tgagcatgaa cccgcgggag gagagtctga 360  
 ggaacggcgc catcatcagg tccgagcggc cgagcgccag gaactgcctc gccga 415

<210> 1773  
 <211> 321  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-F4

<400> 1773

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gccgagtcac cgaaggcatg cagtcctgca gtcctcgcca aggcacccga gtctgctgcc 240  
acgaaaactt gccccgctta gggaactcca gccgccttca accccgccgt tggcggttgc 300  
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<210> 1774

<211> 381

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-F5

<400> 1774

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acctccgcgg ccgtggcggc ggcgagggcc gatgacgcc tgcgccagcg cccgcggggg 180  
ctcgtgcagg tccgggagcg ggatcagggc ccgctgtcga cggggcacca gcacctgcac 240  
caccatcacc accagctgct gcggtcggcg gcgttccac cccgccgcc ggggccgggg 300  
cgccgctctc ctcagcgtg ccaatgccac ctcaacatca gggagcagcg ctctgcagc 360  
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<210> 1775

<211> 385

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-004-Q1-E1-E1

<400> 1775

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cccgggtcatc gacaacctgg ccgtgctgaa catgcangtg gacgcgttcg ccaagcgcac 240  
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ggcgctcacg ttctgcgaca ccatgtacat gaacacgcag gacaccatcg gcgcggcgca 360  
acgggccatc acgttcaagg acacc 385

<210> 1776  
<211> 398  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-D1

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ccgagtaa at cgcgggcgca aaggtgaggg tgagatgcaa gcacttcggc accggcagct 240  
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cagccacgat gaggacatct gcgaggtggg cttgggtggag agccgcgcaa agactgcgat 360  
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<210> 1777  
<211> 438  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-D4

<400> 1777

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ggtggagagc ccgccaagg actgcgacca ggtgcaggcg gacagggacc gcgccggcgt 420  
cctgctcacc aggaacgt 438

<210> 1778  
<211> 422  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-D5

<400> 1778

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tagccctcgc gctagtggcg gccaccgccc cacaggtagc ggaggcaaag aagaagagag 180  
cggcggagag cggcgaggcg gcggaggcga agaagatcca ggacgacttc tgctcgacgc 240  
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agcagtccaa cctggtgctg tacggcagga tccagtgcaa gggcaagtgc accgagcaga 360  
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tg 422

<210> 1779  
<211> 434  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-A8

<400> 1779

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ctgatcctcg tcagtgtttt attcacgctc ttcgtcgata cataataccc gtacaagtgg 180  
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gatctaattgt cgtcccaggc cacattgttg tggacagatt taattagcgt cgggttggca 300  
aattaaaaca tgtatatgca aagtactgtt aaaggttggc atggtgtaaa cagtgtgagc 360  
tatctcccta aatcattatg tcacatattt gagacagtct ttccgtatct gcgaaaacaa 420

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434

<210> 1780  
<211> 406  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-A9

<400> 1780

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ctgccaccct acagcggcat gacggcgtgc ggcaacgtcc ccatcttcaa ggacggcaag 180  
ggctgcgggt catgctacga ggtgagatgc aaggaaaaac ctgagtgtctc gggcaatcca 240  
gtcacgggtgt acatcactga catgaactac gagcctatcg ctccctacca cttcgacttg 300  
agcggcaagg ccttcggctc cctggcaaag cccggggtca acgacaagat tcgccactgc 360  
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<210> 1781  
<211> 422  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-B1

<400> 1781

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ccggcaacaa caaccgccgc cgtaatccta tgcctatgcy tcgtcttctc ctgtgccgcg 180  
gctgacgacc ccaacctccc cgactacttc atcaagggcc gcgtgtactg cgacacctgc 240  
cgcgccgggt tcgtgaccaa cgtcaccgag tacatcgccg gcgccaaggt gaggtggag 300  
tgcaggcact tcggcaccgg caagctcgag cgcgccatcg acgggggtcac cgacgcgacc 360  
ggcaactaca cgatcgagct caaggacagc cagaggagg acatctgcca agtgggtgctg 420  
gt 422

<210> 1782  
 <211> 385  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-004-Q1-E1-B10  
  
 <400> 1782

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gttggtgagt ctatttcac tttcggaatc gaccatgatt tcaactggat gtgctacca  180
ctccttgta gctctgttg tatcattgtc tgcttgatca ccacccttt tgctactgat  240
ttctttgaag tcaaggctgt gaaagaaatt gagcctgcac ttaagaagca gctcatc  300
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ttcaccatct acaacttcg tactc                                           385
  
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<210> 1783  
 <211> 319  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-004-Q1-E1-B3  
  
 <400> 1783

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ccgttgaggt tgcggtgat gaacaggta ctgagaagg ggtggtggag gagccggtg  180
cggcgccga cgttgagcat cagaaggcta atgagggtg ctctccagag gcggccgtcg  240
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cagcggcagc agcccatgc                                           319
  
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<210> 1784  
 <211> 460  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-004-Q1-E1-B6

<400> 1784

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ggagcgcgag ttccaggcgg aggtggagat catcagccgc gtgcaccacc gccacctggt 180  
gtcgctcgtg ggctactgca tcgcgggcaa ccagcgcgat ctcgtctacg agttcgtggc 240  
caacaacacg ctggagcacc atttgtacgc caaggacggc cctgtcatgg actggagcac 300  
ccgcatgaag atcgcgctcg gctccgcaa gggcctcgcc tacctccacg aggactgcca 360  
tcctcggatc atccaccgcg acatcaaggc cgccaacatc ctgctggaca acaacttcga 420  
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<210> 1785

<211> 340

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-C1

<400> 1785

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tctctgctca atataagact gagggcactt gaagatgacc aggagtttct caagcagggtg 180  
ttgagttccc tccaatgcgg tagtgatgga ctgcagtgtg tacaggagat aagcggccat 240  
ctagcagagt tgcgaagagt tgtgactcgc taaggaaaat ggttttgccc cgagtccaaa 300  
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<210> 1786

<211> 369

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-004-Q1-E1-C2

<400> 1786

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gaaaggttgg ttccgtgtga ggcagccctc gccggcggaa tcaccgccgc ctctcgctgc 180  
ggactcgctg gtgtcgacca ttccatgccg ggctccgact acaactacct caagttgcc 240  
cgtaatctct acgaagtcga aatcctcact gggcagcttc agaactaaac tagtgactac 300  
accctacacg tggtgggtat gttattgcgc tgtgtacatc ttcatgcaga ccttcatgat 360  
tccaaggac 369

<210> 1787  
<211> 184  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-C3

<400> 1787

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attccccaag atctgcgtgg acagcctcac cgcaaagcca gagaaccaga agggcgaccc 180  
gcgc 184

<210> 1788  
<211> 332  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-H12

<400> 1788

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agagagggag ggagagaggg aaccgggaga ccgccaccaa gcgtgaggca gaggaggagc 180  
atggcgggcg cgccgtcgag gtcccggggc gactacgacc acctgattaa gctcctgctc 240  
atcggcgaca gcggagttgg aaagaattgc ttgctgctgc gcttctctga tgacacattc 300  
acaacaagct tcatcaccac cattggcatt ga 332

<210> 1789  
<211> 325



<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-H6

<400> 1789

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 gtcgtcgagg tgaagaagtc ggcaggcgac acgctggagt atgagatgtt ctgcagcaag 180  
 ggcctaagac cttcactcag cgacatctgc tggagcagcc gatctgagga gaacatggct 240  
 ctttcagtgg ttcagccatc ataaattgaa accatccctc ttagaccgtc tccagcactt 300  
 tatccatatg gtccccccct cttag 325

<210> 1790  
 <211> 355  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-H7

<400> 1790

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 ctgctgtgcc tgctcgtgtt ctgagacagc tgattgttct atacgcctct ttgtcgatat 180  
 tgaacatggg gacagagga tactaatggc tgacacgtat agtatacagg gtaatggtct 240  
 gtatcgacaa gcatgtgtct aaagcatgct gatatacagt tgtaatatga tgaaacatgg 300  
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<210> 1791  
 <211> 335  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-003-Q1-E1-H8

<400> 1791

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gggtacgcca tcgacgagct caagtcgtcc ttcgacaagc taggcggcctt cgagatgacc 120  
aacttcaaca aggccgtgga cgacctcaag acgtgggtca gcgccgcgct cacgtaccag 180  
gacacctgcc tggacggcctt cgcgaaacgcc accaccaccg aggcctccgc caagatgcag 240  
aaggcgctca acgcgtcgca agagctgacg gaggacatcc tgnccggtggg ggaccagttc 300  
tccgacacgc tgggagggct caacattcgg ccgcg 335

<210> 1792  
<211> 422  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-004-Q1-E1-A1

<400> 1792

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tacgcgtgga taacctggtc atcaccggca agggaaacct tgacgggcag ggcccagccg 180  
tgtggagcaa gaactcctgc accaagaagt atgactgcaa gatccttccc aactcgctgg 240  
tgatggactt cgtgaacaac ggggaggtgt ccgggggtcac gctgctcaac tccaagttct 300  
tccacatgaa catgtaccag tgcaagaaca tgctgatcaa agacgtgacc gtgacggcgc 360  
ccgggggacag cccaacacg gatggcatcc acatgggcga ctcatccggg gattcacatc 420  
ac 422

<210> 1793  
<211> 283  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-A3

<400> 1793

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aagtcccccc aggcaagaac atcacggcca cctatggcaa ggactggctg gacgctaaag 180  
cgacatggta tggcaagccg acgggtgccg gtcccgacga caacggtggt ggctgcgggt 240

acaaggacgt gaacaagccc cccttcaata gcatggg'gc atg 283

<210> 1794  
<211> 432  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-A5

<400> 1794

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gtgcaccacc ccgctcacct tccaggttgg caagggatcc aagcctggcc acctgatcct 180  
cacccccaat gttgcaacca tatctgacgt ggagatcaaa gagcacggg gcgatgactt 240  
ctccttttacg ctcaaggagg gcccgaccgg cacctggacg ctcgacacca aggccccgct 300  
caagtacccc ctttgcattc gctttgctgt caagtccggt ggctaccgca tcgccgacga 360  
cgtcateccc gccgatttca aggccggcac cacctacaag accacactca gcatctaate 420  
agcctctgat ga 432

<210> 1795  
<211> 409  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-H10

<400> 1795

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cgcgatcact gcgcgacgag tacaacatgc ccgacaacgc cctccgctgc ggcaaggtag 180  
tggggctgcc gctgccgccg tcctacgccc ccgcgcgcta agacgacgaa ggccctcgttt 240  
tctcctcgtg gtctgaccat ccaatccaaa ctcaaaagaa caaatacgaa agaagcgtag 300  
tgaaggggaa caaatgaatg gatatatgta atcttgagat gcatgccctc tcaaatcact 360  
gtactggggg tctcaaaaaa atcattgtaa tgggagttat atatataac 409

<210> 1796  
 <211> 339  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-003-Q1-E1-G1  
  
 <400> 1796  
  
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 gtcctcccaa agtcccccca ggcaagaaca tcacgggcac ctatggcaag gactggctgg 180  
 acgctaaagc gacatgggat ggcaagccga cgggtgccgg tcccgacgat aacggtggcg 240  
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 tccccatctt caaggatggg ctgggttggt ggtcctgct 339

<210> 1797  
 <211> 336  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-003-Q1-E1-G12  
  
 <400> 1797  
  
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<210> 1798  
 <211> 412  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-003-Q1-E1-G4  
  
 <400> 1798  
  
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gcacgagcgc tgcccgcctcg ctgaaccatg gcgggctccg cgggtggccgt cgtcctcctg 120  
tcggccgctcg cgtctgctctg cctgtaccac ctctttttcc tctccctgtc cgtcccggac 180  
ccggcagcag cagcagcagc cgtccccgc cgcgcgggtg gccaccgtgg cagcaacgtt 240  
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cgctccaacg accccgccgc cgccgccggc ctcccggaaca tcgacacctt ccgcggcaag 360  
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<210> 1799

<211> 400

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-G9

<400> 1799

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gtggagtcct cagacaccat tgacaacgtc aaggccaaga tccaggacaa ggagggcatt 180  
caaccggacc agcagcgggt gatcttcgcc ggcaagcagc tggaggatgg tcgcaccttg 240  
gctgactaca acatccagaa ggagagcacc ctccacctgg tgctccgcct caggggtgggt 300  
atgcagattt ttgtgaagac attgactggc aagaccatca ccttgagggt ggagtcgtct 360  
gacacaatcg ataatgtcaa agccaagatc caggacaagg 400

<210> 1800

<211> 371

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-D8

<400> 1800

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gatttatgga tttggcatgc tttttttgga ttacctggct ctctcaatga catcaatgtt 180  
cttcatcgat ctcccctggt cgcaaaatta tcaaatggag aaagtccaca agtgaattat 240

agaataaata accatgacta ttcaatggga tattaccttg cagatggcat atacccttct 300  
 tgggcaacat tggttaagac cataccagaa ccacggggca ataaaagaat ctactatgtg 360  
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<210> 1801  
 <211> 401  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
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 <400> 1801

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 aacgcgcccg gcggggcggt cagcaactgg gtggcgatga accagcagag ctacgcgctg 180  
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 ggcggtgaag aagaaggcca cgtacgtggt ggaccccagc ggcaagggcg actacacgaa 300  
 catcaccgcy gcgctggagg atatcncggt gagcaaacac aagcgcgatga ttctggatct 360  
 caagcccggc gctcagttac gcgagaagct gttcctgaac a 401

<210> 1802  
 <211> 370  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-003-Q1-E1-E2  
 <400> 1802

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 gcccgcgggg gctcgtgcag gtccgggagc gggatcaggg cccgctgtcg acggggcacc 240  
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gctcctgcag

370

<210> 1803  
<211> 423  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-003-Q1-E1-E3  
  
<400> 1803

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cctaataaga aaacaaataa ttccaattca tatatgaaca tttttgcctc cttatttctt 180  
gaaaatgtgg aattggaatt ccccgaggaa ttccgatctc atttcctttg gcttcaggat 240  
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cttgaaaatg tggaattgga attccccgag gaattccgat ctcatcttct ttggcttcaa 360  
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ttt 423

<210> 1804  
<211> 303  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-003-Q1-E1-E5  
  
<400> 1804

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atgaacctgt cgagcaccta cggcaagctc gccatggtgc tcgtgggctc cagcgtgggg 180  
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cac 303

<210> 1805  
<211> 99

<212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-003-Q1-E1-E8

<400> 1805

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cacanacaag cagagcaata ttcttgaaga tctggacac 99

<210> 1806  
 <211> 287  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-F12

<400> 1806

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cgctcctccg tgatggccga cgtcgacgtg gacgccaaca acgaggccga gcaaaggacg 180

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agtacacca acgagtcacc ggcgcgcgcc ttcgcggggc aaacgct 287

<210> 1807  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-C10

<400> 1807

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aagggaaccg aagcatcagc catgtcgaac tcggcgctcg gaatggccgt ctgtgatgaa 180

tgcaagctca agttccagga gctcaaggca aagaggagct tccgcttcat cgtgttcaag 240

atcaacgaga acgtgcagca ggtggtggtg gacaggctgg gggggccagg agagagctac 300

gacgccttca cggcctgctt ccccgccaac gaggccgct acgcccgtgt cgattttgac 360



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 acat 424

<210> 1808  
 <211> 242  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-003-Q1-E1-C11  
 <400> 1808

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 tcgacaaagt gacggtcaag ggccccgggg acagcccaa cacggcgggg atccacatcg 180  
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 cc 242

<210> 1809  
 <211> 376  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-003-Q1-E1-C12  
 <400> 1809

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 cgggcctggg gggtccttcg acatcaccaa gttggggcgc tccggcaatg gcaagacaga 180  
 cagcacgaag gctgtgcagg aggcacgggc atcggcgctg ggcggcactg ggaagcagac 240  
 aatcctcata cccaagggcg acttccttgt cggacaactc aacttcacag gcccttgcaa 300  
 gggcgacgtg accatccaag tggatggcaa tctgctggcg aacacggacc taagccagta 360  
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<210> 1810  
 <211> 415  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-C2

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tggccgagtt caacatgacc tcggcgggcg gcgcgcagaa cttcaagtcg caggcggaca 180  
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gcgtgatcca cctccgcgac ggcgcctaact cgcagtagct gaccagcagc gcgttcctgc 300  
tgggtggtgta cgcggacctg ctgctgcgga cggggcagac ggtgctgtgc gggaaccagc 360  
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<210> 1811

<211> 366

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-003-Q1-E1-C3

<400> 1811

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cgctcggctc cctgctcgac gactcttcaa agtccgagaa ctggttcgtc gacgccetca 180  
acagcgccat ctccggctcg ctgcacggca taccgagggg gatctccacc gattcagcct 240  
ccgtcaactg cttctcggc ctgcaggacg actcctccgt gcactcccgat agtggagtaa 300  
ccaactcggc tcccacggag gaccagcgcg ccagccagcc gaagctcccc ggcgggcgcg 360  
ccgctg 366

<210> 1812

<211> 339

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-C5

<400> 1812

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aagcaactcc tgcgatgtct ccatcaagaa cgtcaccttc cgcaacatct ccggcacgtc 120  
gtccacgccc gaagccgtca gcctgctctg ctccgagacg cagccgtgca gcggcgtctc 180  
gctcatcgat gtcaacgtcg agtacgccg caagaacaac aagaccatgg ctgtgtgcag 240  
caacgccaag ggaaccgcca agggaagcct ccaggccctg gattgcctcg tctgatcaat 300  
gaccttgcac ttgcatgcat tcttcttccg tttcacttt 339

<210> 1813  
<211> 411  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-003-Q1-E1-C6

<400> 1813  
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cgttatcctc ctcttacatt acaggtcata gctaagcagg tctgacagga tgtcgtggca 120  
gacatacgtc gatgagcacc tcatgtgcga gatcgagggc caccacctga cctccgctgc 180  
catagtcggc cagcagggcg ccgtttgggc ccagagcacc gcattccac agttcaagac 240  
agaggagatg accaacaatca tgaaggactt cgacgagccc gggttcctgg ccccgaccgg 300  
cctcttctc ggccccacca agtacatggt catccaaggc gagcccggcg ctgtcatccg 360  
cggaagaag ggatctggan gcataactgt gaagaagaca gggcaagcga t 411

<210> 1814  
<211> 351  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-C9

<400> 1814  
tacatcgcta gctcgccacc aacaatggcc tcaaggtact ctatcctgct tgccacaacg 60  
aactggcta tgttgttcgc attcggttcg tgcaccacc cactcacctt ccaggctggc 120  
aagggtcca agcctggcca cctggttctc acccctaaca ttgccaccat ctctgacgtg 180  
gagatcaagg agcatggcgg cgacgatttc tcttttacac tcaaggagg cccagctggc 240

acttggacgc tcgacaccaa ggccccgctc aagtaccccc tctgcatccg ctttgctacc 300  
aagtctggcg gctaccgtat cgccgatgat gtcacccccg ccgatttcaa g 351

<210> 1815  
<211> 361  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-D1

<400> 1815

cagacgttga ggtcgagggg cacggtatct ctgagcttca tcggagagcg acccgccacc 60  
gccacgcttg gccgcaagcc gagaagagtg ccgggccggg agaccggacg attattgac 120  
cgtagcagat tcgctaattg cggtacggc ggacatggag cggatcttca agcgggttca 180  
caccaacggc gacggtaaga tctcgtctgc ggacctgacg gaggcgctac ggacgctggg 240  
gtcaacctct gccgacgagg tgcaacgcat gatggccgag atcgacaccg acggcaacgg 300  
ctgcatcgac ttcaacgagt tcatcacctt ctgcaacgca accccggggc tcataagggg 360  
c 361

<210> 1816  
<211> 390  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-D10

<400> 1816

ctgtgaaatg ttgagaacca tgtggtcgtc aatgcgggca caggttgcca tgggtgtggc 60  
gttgggtgttc ttggtgagag gcgcatggtg cggctctccc aaagtcccc caggcaagaa 120  
catcacggcc acctatggca aggactggct ggacgctaaa gcgacatggt atggcaagcc 180  
gacgggtgcc ggtcccgacg ataacggtgg cggctgcggg tacaaggacg tgaacaagcc 240  
ccccttcaat agcatgggag catgcggcaa catccccatc ttcaaggatg gtctggggtg 300  
tgggtcctgc ttcgagatca agtgcgataa gcctgtggag tgctccggca agcccggtg 360  
ggtgcacatc acggacatga actatgagcc 390

<210> 1817

<211> 391  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-003-Q1-E1-D12

<400> 1817

acattggtgt taatgttaaa aacaagttgg cctccattcc gggaaaaggt tccaatggtt 60  
gtggcctttgg ggtccttggg aaaaggccca tgggtgcggtc ttcccaaatt cccccaaggc 120  
aagaacatca cggcaaccta tggcaaggac tggctggacg ctaaagcgac atggtatggc 180  
aagccgacgg gtgccgggtcc cgacgataac ggtggcgggt gcgggtacaa ggacgtgaac 240  
aagccccct tcaatagcat gggcgcatgc cgcaacatcn ccatcttcaa agatggtctg 300  
ggttgtgggt cctgcttcga gatcaagtgc gataagcctg tggagtgtc cgcgaaaccc 360  
gtggtggtgc acatcacgga catgaaacta t 391

<210> 1818  
<211> 377  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-003-Q1-E1-A12

<400> 1818

gtgccgcctt cgggtggcgga caccttgacc cattaccggc tgacggcaac ggcgggcacc 60  
ttctgctaca tcgaccgga gtaccagcag acggggaagc tgggcgtcaa gtcggacatc 120  
tactcgctcg gcgtgctcct gctgcaggtg gtcaccgcgc ggccacccat ggggctcagc 180  
caccacgtcg agaaggccat cgacgcgggc accttcgcgc agatgctcga catcacgctc 240  
aaggactggc ccgtcgagga ggcgctcggc tacgcanagc tcgcgctcaa gtgcacggag 300  
atgcggccga gggaccggcc ggacctcgca accgtcgtac tgccggagct caaccggtta 360  
aggaacttcg ccacgcg 377

<210> 1819  
<211> 336  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A3

<400> 1819

cgcgacatgg tgategagct ctgccaggag ctcatcgtga gcagcgacaa gaccatcgac 60  
gggcgcggag cgcaggtgca catcgtgggc gcgcagatca cgctgcagaa cgtgcgcaac 120  
gtgatcctcc acaacctgca cgtccacgac gccgcggcgc acggcggcgg cgcgatccgg 180  
gactcgcagc accactgggg cgtgcgcggg gagagcgcgc gcgacggcgt ctccgtgatg 240  
gggtccagcg atatctggat cgaccacctg tccatgagca gctgcgcgga cgggctgggtg 300  
gacgcggtgg acggctccca cgccatcacc gtctcc 336

<210> 1820

<211> 331

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A4

<400> 1820

tctagagtga atcgtattca tcgcgctgtc gcgggggtag gggctggtga tcaactatcgc 60  
ttgccgctcg gtgatccatg gccggctccg cgggtggcgt cgtaccctcg tcagccgctcg 120  
ccctgctctg cctgtagtac gtccttttgc gtcctctgtg cgtcgcggaa gcggcatcag 180  
cgtcagcagc cgtcccccg cgcgccggtg gccaccgtgg cagcaacgtt ccgtctgggt 240  
cacgaaccgt ccaactcgtc ctccgcttcg gcctgtccgg gcagccgctc cgcctctacg 300  
actccgtccg ccgccgctgg cctccccgac a 331

<210> 1821

<211> 370

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A5

<400> 1821

ccgacccaag cgtccaccgc cgccgtaatc ctatgcctat gcgtcgtcct ctccgtgtgc 60  
gcggctgacg accccaacct ccccgactac gtcattcagg gccgcgtgta ctgcgacacc 120  
tgccgcgccg ggttcgtgac caacgtcacc gagtacatcg cgggcgcaa ggtgaggctg 180

gagtgcaggc acttcggcac cggcaagctc gagcgcgcca tcgacggggt caccgacgcg 240  
accggcacct acacgatcga gctcaaggac agccacgagg aggacatctg ccagggtggtg 300  
ctggtggcca gcccgcgcaa ggactgcgac gaggtccagg cgctcagggg cgcgcgccgc 360  
gtcctgctca 370

<210> 1822  
<211> 349  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A6

<400> 1822

gcacgcctct acagggcatc ttgtcatggc gcaagggtggc gcccgcctct atggagccgg 60  
tggcggacgg gaccgccgcg ctgacgtcaa cgaccggctc gtgtagcgtc aagtatgact 120  
ggcaagggttc gtggccagcc gtcaacaagt tcatggccga cgccgacgtc acgttggcct 180  
ataagcccggt caggaccaga gcgatcgcgc gctcaatcag cagcatgata gacatcacgg 240  
ggacctacag catcgatctc accgaagttg ctcaacatga catacgggaa catgatgctt 300  
atgttcagtg gctcatcga cgccactacc gcttagcaca tcattgata 349

<210> 1823  
<211> 425  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A9

<400> 1823

ccaaccaagc ctccgagccc ctggctcctg gtccgttttg gttttggggc aatggttccc 60  
aacaacggca acaccaacgg ttacaacagt tcattcccgg aaggcggggc tcacctctcg 120  
ccaaaaaggc tctggattcc gggcgtggcg gagggatgtg ctgaggccgg acaggacggc 180  
cggcgaagct tgggcgccgc cggcgcccaa ggccaacagc aacgtcccag gagggccctt 240  
cgtcgtcgtg tgactcatcc agatccagtc gcacccgccc aatcgccatc gtttcatgac 300  
acatcgacca gaagatagct agcaattccc atctcactgg tgtgtgttat tttagcttct 360  
tttaacgatg aagaactagt ggcatgatt gaaataatac aacttaatgc aacgaaaatt 420

aagaa

425

<210> 1824

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-B1

<400> 1824

gtcgaccgac ccgctccactg aagcatttat cagcгааага tcaatgggca atggagaatc 60

tggtgtatat cagaatgata atttgcacaa gtcacagtg ctacatactg ggctgattga 120

tactgatcca agtgtgaact tgcacggcaa tgggtggcctc tctgtgtctt cgtctcaaaa 180

tccagttgtg gactgtgttt ctaggagaga ggatccccctt cgtgattggg gcaatatcgc 240

ctgcagtгаа ggaataattg gatgtgacca taccaccacc gataatgaac acataaagct 300

agcacacagg ctgcacgata atgttcaaаt gaatgtacct gtcatagttg aggacgtgac 360

tgataatgtg ccttcaggca ttccatcat 389

<210> 1825

<211> 414

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-003-Q1-E1-B12

<400> 1825

acgcctccct cctccccggc cgggacaaaa cggcggtctt tctccttcgg cccctcccgg 60

ctcttttctgt gaggcgggaa ccaaggcgga tgccgaggcg acggggctcg cgcaccgcac 120

gcgtgtgccc gccgcccggg ggccaggcga ggtggtgagg tgaggccgag cgcggtttta 180

aattgttcac ccggccgccc ttctcgccgt agttttcagt ggtacaagca agggaggaac 240

gaacgtgagg gctgcctgcc tgctgcgga catgggctcc agcctcaagt accgatctgg 300

cctgtgcctc atcgtcgcg tcgtgctgat ctgggtcatc tctgccgagg tcacgcaggg 360

gatattcaca nagtacagac atccatttgc agttacttac ttgggggcct ccct 414

<210> 1826

<211> 354



<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-B3

<400> 1826

cgtcaacctg gatccaaccc ctacgaagcg gacgaggata gccattgccg aaatgcagcg 60  
 gggccctctc egggcgtctc tgccagctgg gtcggggcag gacgcccgat ctgttggtgc 120  
 tccgccgaag cccaccattg gcggcgccct atcgtggatg tggtaggcagt cctgagcagc 180  
 gaaagctctg tgcccgggtg gcgggggggc ctatcacctt cgctcgggtc gctccaatgc 240  
 ccattctcgg cgggtgccatg accttggcgg gactgggctc catggcggtc tccttgcagc 300  
 gaaagctcca tgtcagtagc tggaaggtgc ccacctttgc aaggcccacg tcat 354

<210> 1827  
 <211> 382  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A1

<400> 1827

ctcacggggc gatacacgcc tctagagtga gtcacacctat ggaagctctc ttctttcttc 60  
 ctctctctcg tcctctcgaa ttccgtctct tgtctctgtc ctctctcgctc ggcttccccg 120  
 gttcttgaga ggggaaatag gaggcggagc cgaggagagg gatggggagg gacgagaggt 180  
 tcccagtgtg ggacgccgcg ctcggcgctg gggtcgccgc cgccttcgcc gctgggctcg 240  
 tcgggggtta cctttccatg ccggactccg actacagctt cctcaagctg ccacgtaatc 300  
 tccaggaact ccaaactctc actggccatc ttgagaacta tactagcgac tacaccctac 360  
 aggtgttggt aggtactgc gc 382

<210> 1828  
 <211> 256  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A10

<400> 1828

cgccgcaacc gcaacatcag ccatgggcgc ctgcgcaacc aagcccaaaa cgcttgaggg 60

gcaggcccca gctgaggccg ccgtctccac acccaagggt gcgcccagg ccaactccaat 120  
ctccgttgag gttgcggctg atgaacaggt agctgagaag gtggtggtgg aggagccggc 180  
tgccgcggcc gacgttgagc atcaaaaggc taatgaagtg gtcgctccag aagcggccgt 240  
cgccgagccc gattac 256

<210> 1829  
<211> 225  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F9

<400> 1829

ggaactcgcg cgcacgacaa caaggcgag cataggtaca cccgttgac ccgcttgct 60  
ggccctctgc gctgtgtgcc ggcatcgccg aagaggtcag cggccgcaga tttcaaggca 120  
gggacgagca acggtaacgc agtcagcgtc aaatcaatcc atgacgacgt ctgatagatc 180  
ctgtgagatg acctgaagg gacgttacta ggcgtgtgta ttttc 225

<210> 1830  
<211> 139  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H3

<400> 1830

cagggactcg ctgtcgtctt cgcccaaagg gcccgacgtc gagctgccgc acgcgaactt 60  
cacctggac cgcctcatcc agatgttcgg cgccaagggg gtcacggttc aagagctggt 120  
ggcgtgttcc ggggcccac 139

<210> 1831  
<211> 344  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-051-Q1-E1-H4

<400> 1831

atcaggggtcg agcacacgta cacgacatta tcgatcgaaa actcgccctc gtccgggaag 60  
 ggtaaatttg gtcctccccg ggccgggtgt tcaatggaaa aacaaccaac ggtggccaag 120  
 ttcggcacct gggacagcgg cgatcccggg tacacggcct acttcgacaa ggtgcgcgag 180  
 aacaagggcg ccacggcgcc gccgctgcgc cggccgcgca gcccacga ccccgacccc 240  
 gaccgcgagc ccgagccaga ggaggggcca atgangagag tccccgcgcg tcgtcgtcaa 300  
 ggccggcgac cgcgggaggc caccgcgagc cgccgcgcgc gggg 344

<210> 1832  
 <211> 150  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H7

<400> 1832  
 tcgcgctggc gtccggggtt gctggtccac catgaccggc gggcctcggg acccgattcc 60  
 gctggggcgc aaggactcgc tgtcgccgtc tcccacaggg tccgaagtcg agctgacgca 120  
 cgtcaacttc atcgtcggcc ggctcatcca 150

<210> 1833  
 <211> 217  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H8

<400> 1833  
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 ccgccagggc cacctgatac ggtcagccca acggtgccag cgctcctgac aacggcgggtg 120  
 cgtgcgggat caagaacgtg aacctgccac cctacagcgg catgacggca tgcggcaacg 180  
 tccccatctt caaggacggc aagggtgcg gctcatg 217

<210> 1834  
 <211> 203  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-A11

<400> 1834

cgccccgac gccgtgccct acctccagcc gtccttgccc ttctgtccg cggcgcggtc 60

cccgttcctc atcaactgct accctactt cgcgtacaag gccgaccgg gcaacgtgcc 120

gctcgagtac gtctgttcc agcccagcgc cgccggggtc accgacgcc gcacggggct 180

caagtacgac aacatgctgt acg 203

<210> 1835

<211> 400

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-G3

<400> 1835

cacatgataa aaccagtggc atttgagctt ggcattcctc ctgaaaacat cactgcgaac 60

caattgttac ttggcacatt gggggagtac gccggatttg atcccacaga gccacttca 120

cacagtgggg gtaaagcaaa agcagtgcac cacatagcac aggaccatgg ctacatgaca 180

gttggtatga gtggcgatgg cgcaactgat ctggaagctc ggcaacctgg cggagcagac 240

ttgttcattc gttacgccgg ggttcagatt agagagccag tcgcagcaca agctgactgg 300

gtggtttttg attttcaaga gccgatcact aacttgccat caattcatta actaaccxaa 360

tttatgaaac ctttgcattt gcccggaaca gaaattgcgg 400

<210> 1836

<211> 107

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D10

<400> 1836

acaacaccct gaggtgagtc gtattaagtc ttctgcactg tgcattggtg caacgcgcac 60

tcacaagata agaattctga atcctcggcg cctggtgggt cattaga 107

<210> 1837

<211> 289

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-C11

<400> 1837

cgctcctatta gctcttctgc accgtacatg gtgataaggc aaactcaaag gacaaccatt 60  
caaaagcgtc cgggccctgt gggtccttcg acatcaccaa gttgggcgcc tctgtcaatg 120  
gcaacaccgt tagcacgaag gctgtgcacg aggcgtgtgc atcggcgtgc ggcggcaccg 180  
ggaaccacac gatcctcatc cccaaaggcg acttcctcgt cggactactc aacttcacac 240  
gcccattgcaa aggcgacgtg accatccagg tgaatggcaa tctgctggc 289

<210> 1838

<211> 355

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-050-Q1-E1-G9

<400> 1838

aagcttgcaa aaacttcctc ggtcaatcag ggcattgcta gagcttagat gcctttgtct 60  
ctatggaact tccctaagct atgtaccaa ggggtgttgg aaattgaagc atctcaatca 120  
tctagatggc ctaatcattg gtcattgcaa caatgcgcct gaagggttgt gaacttagat 180  
gaccttaaag cattgtcaga actaaggcac cttcatatan agagtttggga tagggctact 240  
tccggtgcgt ctgcactcgc aaacaagcca ttccatagagg atctgtacct ctctgagcaa 300  
gcaccagcaa tagaaaatca ggaggatctg gaggacaaag atgaaacaga aaaag 355

<210> 1839

<211> 369

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-H2

<400> 1839

gggtcgagcc cgcgtccgga gaaacgcgag caaccagcga tcgccccatg gccgccatgg 60  
ctcgttccgt ctccctcgtc gtgggcgccc tgcctcctct ctccctcctc gtctccgcgc 120  
cggccagcgc gcggaccgtg ggcgacaccg tgcaggacgc gtgcagcaag acccagttcc 180  
ccaagatctg cgtggacagc ctgcgccgca agccggagag ccagaaagcg acgccgcgca 240

agctggggga gctgttcgtg aacatcgcg gcgaaaaggg ggtcgggaat ggcaccttcg 300  
 tgcaacgcag gttcagcgac aaggaggaca gcgacatgtc caggtgctac gacagctgct 360  
 ccgacgacg 369

<210> 1840  
 <211> 434  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-050-Q1-E1-H3  
 <400> 1840

ttcgcggggc caccacgcg atccgatcca ggacaaggag ggcattcccc cagaccagca 60  
 gcggctcatc tttgctggaa agcagcttga ggacgggcgc acgcttgccg actacaacat 120  
 ccagaaggag agcacctcc acttggtgct gcgcctcagg ggaggcatgc agatcttcgt 180  
 gaagaccctg accggcaaga ctatcacctc cgaggtggag tcttcagaca ccatcgacaa 240  
 tgtcaaggcc aagatccagg acaaggaggg catcccaccg gaccagcagc gtttgatctt 300  
 cgctggcaag cagctggagg atggccgcac ccttgccgat tacaacatcc agaaggagag 360  
 caccctccac ctggtgctcc gtctcaaggg tggatgcag atctttgtga agacactcac 420  
 tggcaagaca atca 434

<210> 1841  
 <211> 276  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-050-Q1-E1-H9  
 <400> 1841

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 cggacaagtc aatcttcctc aactgcaaga tggagggggt ccaggacacg ctgtacgcgc 120  
 actccaaggc gcagttctac cgcaactgca tcctctccgg cacggtggac ttcattcttcg 180  
 gcgacgcggc ggcggtgttc cagaactgca tcctggtgct gcggcgccc atggacaacc 240  
 agcagaacat cgtgacggcg catggccgcg cggacg 276

<210> 1842  
 <211> 116  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-050-Q1-E1-E6  
  
 <400> 1842

ccacgcgacc gacacgaccg ccggcgacga tgcaggatgg aggaatcaga taccggcgcg 60  
 cggcgatcga tcgctccgcg cagctcatcg gcggcgacgt gcctgtgggt cgctct 116

<210> 1843  
 <211> 399  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-050-Q1-E1-E7  
  
 <400> 1843

cgcacgcgta cgagtcattg cgccgtcgtc gtccctgccg cggagcgcg ggcagctacc 60  
 cgacccgccg tcaccgttca gtcaccaacac ggggcaccac cccgtctccg tgcccaccac 120  
 acctaggttg tccttatcgt gtcgtcgtt cgccacatg gtgaccccg ccaccgacac 180  
 accgccgatc acgcccacca agaagcagga cgacaagccg aagccgacgc cggaggccgc 240  
 caccgcgggc aactacgctt cgttgtggtc gcccaagcgc ctcatgcagc gcgctgccc 300  
 cgctttccgc cgcagcaggt cgcgcgccc cgtcaggacg gtcaaggacc tcgccgagga 360  
 acgggcctca gtgctcgccg ccagcaacaa ggtctccga 399

<210> 1844  
 <211> 388  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-050-Q1-E1-E8  
  
 <400> 1844

cccacgcgat ccgaacagag ctactagcc agccagccag cagccagctt gctcgccgcg 60  
 cccgtccttc ttctcgcct ccgttccatt ccgtcccgcc ctccaccgcc gccgcgcat 120  
 tcagggatgg agatgaagaa gatcgctgc gccgtcctcg tcgccgctc ggccggccacc 180  
 gtggcgctcg ccgcggaggc tccggctccg gccccacca gcggctcctc cgcgctcgcg 240

cccgccgctcg ggcgcgcctt cggggcgccg gtcgcctcct tcttcgccta ctacattcag 300  
 tgatccggcc ggggcgctcg gatgccgacg aagagacgac ggggagagag agtgacatgg 360  
 ctggcgcgat tccgatgcgt gggcatgt 388

<210> 1845  
 <211> 334  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-050-Q1-E1-F1  
 <400> 1845

cccgccacgg actgcaacta ggtccacgcg ctcacggatc acgcccggcg cctgctcaca 60  
 aggaatgttg gtatctacga cagccagctt gtcgctaacc cgctcggcta tctcacagac 120  
 gtggagctcg ccgtctgaga caccgctggc atcaagcagc atggaactca gcacgacgac 180  
 aacgagcagt agactatagc acgggcgagt cccggacatg ctgcacaata ctacaccgat 240  
 acacagcgaa cgcattggcat ggatagcact atctaccgca agaagtcgca cacaaggatc 300  
 atgacagatg tatcacactg cttgattcac ttgc 334

<210> 1846  
 <211> 422  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-050-Q1-E1-F12  
 <400> 1846

gtacgggtgat gtccgggtga ctcacgcgtc cgagacaaga cgcgcatcaa tgctgctga 60  
 taaggaggag gttctgcagg ctgctgtctc ccgcgttagt gcactggaag aggagcttgc 120  
 agctacaaag aagaccttgc aggagactct tgagcgtcag ttggagatcg ttgcatacat 180  
 tgagaagaag aagaaaagca agcgtttctt tcgttggttag aagcaaacag cagtgaattg 240  
 ttcacgcccc cgagaaaaaa ggttttgcgt gtgatggaag cgagctgggtg cttgcgtatg 300  
 ccagcaagct gcgattctga gtgtaacaca taaggatgtt ctttcattct tcttttttgt 360  
 tcccttggtg catcaaattg tgccttaacc acgtcgatgt gctgccaaat tgtcaatccc 420  
 tg 422



<210> 1847  
 <211> 415  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-F2

<400> 1847

acgcgtccga ctggatggag tcgtgcagac cgacccccgc tgcctctgca tggctcctgga 60  
 cggcaccgcc acgtccttcg gcatcgccat caaccagacc agggcactgg agtccccggg 120  
 cgtctgcaag gtcaaggcgc cgccgctcag ccagtgcaca ggcgcccttg cggcacctgc 180  
 accgacgcct cccgacgaac cagcagcggc agcggaggaa gaagccgaca cagctgcaga 240  
 tgcgccttca gcaaattgga gcctcaagcc tcacagactc aaagaatgca gcgagcttac 300  
 tgcttctcat ctgcgcttgc ctgtatgcct tctaataagt ggtgatacaa cttcgctggc 360  
 catgtcaccg tgcaggaatt aggtctttcc ctgagtcctg actatgtact tacc 415

<210> 1848  
 <211> 372  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-F3

<400> 1848

tcgtctcacc ctccctccct cacacaaata atacggaaag gtcgcgcctt tttcctccga 60  
 catccacagc gggggagggg aaaacacgta cattcaccgc ggggcaataa tggcctcggt 120  
 tccggctccg gcgacgacga ccgcccgt catcctatgc ctatgcgtcg tcctctcctg 180  
 tgccgcgggt gacgaccga acctccccga ctacgtcatc cagggccgcg tgtactgcga 240  
 cacctgccgc gcccggttcg tgaccaacgt caccgagtag atcgcgggcg ccaaggtgag 300  
 gctggagtgc aagcacttcg gcaccggcaa gtcacagcgc gccatcgacg gggtcaccga 360  
 cgcgaccggc ac 372

<210> 1849  
 <211> 257  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-F9

<400> 1849

tcaaccagcc caccgccacc tccgacctct tcggcgacaa ccattgctat cgccagctgt 60  
ccgagctcgc acaatcatgc ggtcaaagct cgccgaagtg gccaaagtca aggagctgca 120  
cacactcaag ggacacgtcc agtccgtcgt caatctcaag ggccctccaca ttgacaccat 180  
tcagcagagc tacaccgtgt aaactcgact caatTTTTTT aattgctttt ttttccatac 240  
acatacaaac cacacac 257

<210> 1850

<211> 318

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-050-Q1-E1-G2

<400> 1850

gggcccggcc gcgtccggac tcaactaccc cgccttcacg cctccctcac caaataaggt 60  
cncgcccttt tccgacattc acagggggga caggaaatca gcggccatgg cctcgattcc 120  
ggcgacgacc ttgcgcgtca tcttatccgt cctctttctgt gccgcggctg gcaccgccgt 180  
cgacaacgac ctccccgact acgtcatcca gggccgcgtc tattgcgaca cctgccgcgc 240  
cgggttcgtg accaatgtca ccgagtacat cgcgggcgcc aaagtgaggc tggagtgcaa 300  
gcactttcgg aacgggaa 318

<210> 1851

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-E4

<400> 1851

ggggccagca cgcgtccgac cctgacgatc gggaaacagc agaaaatgtc tgccttcattg 60  
agcttccagc aaagcgtgca agctgcaggc ctgccaggca gccagcccaa ccagacgacg 120  
gagctggacc ttttccaaga cctgcagttg cctcaggccg gggcgagag cacaaaccca 180

ttctctgatg agagcggttca gggataccca cagtacatga acgggcccac cggcgacaac 240  
gcacagccag gccaggactt ccaacagcag tctctgaagc taccggcggc gagcccgtag 300  
gacaatttcc taagggctgc tggctgttag gagtccagtt acatgaacga caaccacctc 360  
acctcaagat agtcccaacg gaagatcctg caatttttcc ataatttgca gggaaaga 418

<210> 1852  
<211> 284  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-D2

<400> 1852

tacaacactc taacctgagt cgtatgacat cgccctcggc tccgccaagg gcttggctta 60  
cctgcacgaa gattgccacc ccaggatcat ccaccgcgac atcaaggcag ccaacatcct 120  
tcgggacgag aatttcgagg ctaaggtcgc ggatttcgga cttgcccaagc tgaccacaga 180  
caccaacacg cacgtctcca cgcgtgtcat gggaactttc gggatatttg ccccgagta 240  
cgcgtcgagc ggcaagctca ccgacaagtc cgacgtgttc cccc 284

<210> 1853  
<211> 381  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-D3

<400> 1853

acatctctgg atgttacagc gatggatcgc atcatgtac ttatccttgt gtgcatcggc 60  
ctggactgat tcggcgctct ggacgccgtc gatgtgagaa cgggctctgg ccttggttcc 120  
atcctcctaa agctcctgtc tgttgtgtac ggcaacaagg ccacgcttga ggtcaatgag 180  
taccggtccc gccaaagtttc gacttctgta gttgaaccat acaagactgt agtgtccact 240  
gactccctct tcgagcagac tgatgttget aaacagcttg atcataatgc catctacgac 300  
attagcctgc gatcccttga cattggaacc gcaacctaca ccaggctcaa cacgcttgtg 360  
tcccaggtta tcgcatcctt t 381

<210> 1854

<211> 392  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-050-Q1-E1-D4  
  
 <400> 1854  
  
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 actatcatga gcaaggtagc agatgcatcc aaggaggaga tccactccat cgagtcggtg 120  
 aaggaggcaa atgcacggcc ggctcagaaa atcaacagcc gcgttggttcg ctactacaaa 180  
 gcagcaggag ccacagaagc gccggcgccg gcgccggcgc cagaagcaac ctgatcgagg 240  
 agaacgtgag ccttgaagac gtaccacgat gcttctttgt tcggcttcct agatatactc 300  
 gaaagctcgt gtgctgagta ttgacagttt cgttggtgaa acaggttaga acagtagctc 360  
 accctcccga gagtatgggt tgaaaatctt tg 392

<210> 1855  
 <211> 421  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-050-Q1-E1-D5  
  
 <400> 1855  
  
 gcgtccgaag agatgcgctg cgtggacagc cctagcgggt gcaagcccag cgcggcgaca 60  
 ctggtggtga cggcgaccga cctgtgcccg cccaacgacc agcagtcgcg ggacagcggc 120  
 gggtggtgca acccgccgcg ggagcacttc gacctcagca tgcccgcggt cctccagatc 180  
 gcacaggaga aggcggcat cgtgcccac tctaccgca ggggtggcgtg cacgaagcag 240  
 ggtggcatcc ggtacaccat caccgggaac aagtacttca acatggtgac gatcaccaac 300  
 gtaggcggcg cggcgacat cgcggcggtg tcggtgaagg ggagcaagcg cgttaagtgg 360  
 acggagatga agcgcaactg ggggcaagtg tggcagaccg gggacgaact caactgcgag 420  
 t 421

<210> 1856  
 <211> 442  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-D6

<400> 1856

cccacgcgac cgacggcgtg cggcggggac gaccagcagc cgccgtccat ggccgcgatg 60  
ccggcgtcgc tgcgcgccat ccaggccagg aggaagcacg aggcggcgca gcgcgggggtg 120  
cggcggggcga cggccacgag cgcggccggg tgcgcgtgg cggccctcgt caaggccgtg 180  
gaggccgtcc agggcgcggc ggccgggggc gccgcggagg ccgcgcgcgg cgccggggac 240  
gccgtggcgt ggggtgttcag caaggtccac ctccagtgc cgcacctccc cgtcggggctg 300  
ctcgggatgg tcgcctgttg ctcgggcacg atcgtggagg cggcgaggtg ccgcgtggac 360  
gcgaggaagc ccgaaggcgg ccccggcggg cacgcggggg ggcgaacgcc ccggagggga 420  
acgggggcccc cgcgaggagaa cc 442

<210> 1857

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-D8

<400> 1857

acgcatccga caccaccggc ccagtaagc tcacctctc cagttgtcac ccctgccccg 60  
ccgaagaaag aagagcagtc attaccacca ccagcagaat cccaaccccc accatcattc 120  
aatgacatca tccttcacc tatcatggcc aacaagtagc catctccgcc tccccctcag 180  
ttccaagggt attaagcgcc acagagacat ggttgatgaa gcatgaatgg aacagtctat 240  
aaggtcacat gcgcagacaa actgctacat gtaaaacact gcaagcgtgt gtgaaattgt 300  
ttttttcttt tgcacgtgca cgcgtgagta aattcttatt cgtacatatg tccggacgtg 360  
tgtatgtgtg aactagctgc actacatgac gctgcaacgt gtaagaaagt gtgatttgtg 420  
tg 422

<210> 1858

<211> 436

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-050-Q1-E1-D9

<400> 1858

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ctagcgggtgg ccgccgatgt cgccaacgcc ggccacgcca agcccctgac gcctggcggg 120  
cgcggtggtac acgacaacca cggcaagtgc acggccggggc cgtggaaacc agcccacgcg 180  
accttctacg gcgggcgggg cgggtccggc accacggagg gcgcgtgcgg gtacaaagac 240  
acgcgcgcgc aaggggtaca gcgtcagac ggtggccgtg agcacggtgt tgtttgggca 300  
agggctctgc ctgcccgggg gtgctacgat gtgcgggtgc ttgacagtcc cagcgggtgc 360  
aagcccgcgc cgccggcgct ggtggtgacg gcgaccgacc tgtgcccnac gcaagacaag 420  
tggtgcaagc cgccgc 436

<210> 1859

<211> 385

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-E10

<400> 1859

tcccgggggc acccacgcgt ccgaaaacgc gtccgtagaa aatcaggagg atctggagga 60  
caaagatgaa acagaaaaag aagagaagga acgacaggaa agaagcaatg gccaatgcag 120  
aggagatgag tcagggaaag ctagtgaaaa gatatggaat gagctcaacc caccacagag 180  
catcaagaag ctggtaatca agaactacaa aggcgtaaag tttccaaaat ggataaaaag 240  
tcccaagcta ggagactcct tcccagcct tgtgtttttg gatcttgaaa actgcatgtc 300  
atgtactaaa ctgccttcac ttggcctcct gagtcaacte cagtcgctgc aaatctcaga 360  
tgcagactca gtcacacca tcggt 385

<210> 1860

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-E11

<400> 1860

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acggccattg tcgtcgctt ctccgcctta ttccggcacga cgtccggcgc cgcgctagt 120  
 ggtgactcgt gcagagcgtc atcgctccacc tcggacggag gcagctgcgg caaggggctt 180  
 cgttgacca cctgcgtgcc tccaccgggg acaggtccgg ccgcgtgcgc gcggaccacg 240  
 cccgtggacc caaagacaca cggcacgggt ctccccctca acaggtactc atggctgacg 300  
 acgcacaact cgtttgctgt ggtaagcacc aagtcctcgc tgggggtctg ccatcatctc 360  
 tccgccaac catgaggact cggtgaccga ccacctgaag aacggcctgc ggggcctgat 420  
 cctggatgcc ta 432

<210> 1861  
 <211> 352  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-050-Q1-E1-E2  
 <400> 1861

cgtccgagat gaagccatct gccattgcc tttgtgtgagg gagacgacgt gaaagaagac 60  
 caagggccac gagatggctc tgcgcggcaa cctgcccgctg ctgctccttt tgttcgccgc 120  
 ggcggccacc gcgagcggta agtcggcgag gctcgacctt ttcccagcag caccgggagc 180  
 atccgctagc gcgcggggca agggcgaccg gcgcggcaa gcgtacatct ccgccacct 240  
 cccgtcgcgc cgggggggaa ggcagaaggt tgccgcggaa gtggcatcgt cgtccgccgt 300  
 ccccttgctt atgtcgtcgg gggcctacct atgcacaagg cagtactttg tg 352

<210> 1862  
 <211> 425  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-050-Q1-E1-E3  
 <400> 1862

ggggccagcc acgcgtccga gcgagtggca tctacgacag tgaagcagcg aagcaggctc 60  
 agcagcgcca caactccacg tcgctggcga tgagtggcag agtggctggc atggtctctg 120  
 gagccgctcc gtcgttgaag tgcgagggcg ccgtctgctt cttcctctca tcgctgatca 180  
 tgtccgggtt ctgcatcatc gcttttggct tgagcttgat cctggtctac cgcacaaaga 240

tcgtgtacac aagtctatac gggaaaccgc gtacttgaag gatcaaccct aaatggacac 300  
 agggttatca aagcatacgt caatTTTTTaa gttattagtc tggtagccca tgcctgtaga 360  
 ggtacagtgt cggctctccc gttgttgtgc acaggttctc aagcagcatt tcaagttttc 420  
 aagtt 425

<210> 1863  
 <211> 426  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-050-Q1-E1-D11  
 <400> 1863

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 gtgctcgact ggggtgaagaa actccaccaa gaaaagcagc taggcacgat ggtggacaag 120  
 gacctgtgca gcagctacga cagggtggag ctggaggaga tggccaagt gtccttgctg 180  
 tgcacgcagt accacccgtc ccaccggccc aggatgtccg aagtgatcag gatgctggac 240  
 ggggacgggc tcgcggatag atgggacgcg tctcagaacg tggacacgcc ggagtccgtc 300  
 tcgtcggagc tcctgctcca gaagtacatg gacttcgcag cggacgagtg ctcgctcggc 360  
 ctgcaagcca tggagctctc cggcccgcg tgaccaaccg gcttggtgac cggacccggc 420  
 gggcat 426

<210> 1864  
 <211> 74  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-050-Q1-E1-B5  
 <400> 1864

agtcccatat catcttctgg cttgttcgtg ttggtotcaa tccatgtgga ttgggtggga 60  
 ctggatgggt ttca 74

<210> 1865  
 <211> 163  
 <212> DNA



<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B7

<400> 1865

catcatcttt caccatttcg tgccaagcat aaacaccctc cacctcgaca gcaaggccat 60

eggctgcctt cgcatggagc gcgcgacggg gtcggcagat atgatgaaga cgtactccct 120

actggacacg gtgcgcaggc acaccatcga gttgaacccc cgg 163

<210> 1866

<211> 355

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B9

<400> 1866

ctctccacat cgaaggcctc gtgccttctc ttctccctg tcatggagga aatagctgtt 60

tcgcctatga tcgttgccgc cgtagtgctg gacaacaatg gcgctgacgc tgtctcctgc 120

actgccatcc cctaccgtaa caataagcct agatgagaaa gacaatatca atggggatgt 180

tcccacgata acctcgcccg caagcaacga cgatgatgcy ttgttcagtg tcggagaatc 240

caccaaggac gatggccatc gcttgacgat ggaatgctcc actcacgtct cctccagtag 300

cccttccact cgcaagaagc gcggggcggt cagcctcttc aaggctatgt tcctg 355

<210> 1867

<211> 318

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C2

<400> 1867

ggggccacac acgcgtccga ccacacgtcc gcctccctcc ctcacacaga taataaggaa 60

aggtcccgcc cttttcctcc gacatccaca acgggggagg ggaaaacacg tacattcacc 120

cggcggcaat aatggcctcg gttccggctc cggcgacgac gaccgccgcc gtcacctat 180

gcctatgcgt cgtcctctcc tgtgccgcyg ctgacgaccc gaacctcccc gactacgtca 240

tccacggccg cgtgtactgc gacacctgcc gccccgggtt cgttaccaac gtcacccagt 300

taatcccggg cgccaagg

318

<210> 1868

<211> 300

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C4

<400> 1868

acacgcctct aaagggattc ctgctacgct tccctgcgct tcccctccac cgcgtcgcgt 60

gggccctctg cgctacgagg gcttcaaagt gccctctgcg ccgtcccttc cgtctagcgc 120

cctgccataa tgcacacca gccatcttct gatcctcctg acacctcgaa catgaacgct 180

aagctggaga tccctaggca gcacgccatg ccgtcgtcgc ggtccctgcc gcggagcgca 240

agcgagctgc ccgaccgcc gtcgccgttc agctccaagt cggggccacca cccagtctcc 300

<210> 1869

<211> 379

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C5

<400> 1869

gggcaatgag tttttggatc atcagacctc atgccgaatg gtaatggcca cctgcgctga 60

gcagaactgt ttggcctgtg agctccctgt acattcgggt gcgatgtgag ctccctgcac 120

gttcggtcga ggtctatcgt gacccacta tccgagattg atgtggatca ttgggttgac 180

atgtcagaca gtatacagcc ggtggcagag gaattcctgt ttgctgtggg taaagcttat 240

cttctgcttt cgtgtttttt cttgcttctt tcgattatgg tgtatgaatg tggtcattat 300

gtattagctg attacccttt ccctgctaatt tggacttttag tacgcttcat taagtttggc 360

tgattactgt ttaacgggg 379

<210> 1870

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C7

<400> 1870

acgcgtccga atcacttccct cctcctcctc ctccctctctc caacacccca tccatcagcg 60

ctgccctccg cattgctctt gatcccatcc agtacatcga ttctccccc aagatcaaag 120

gccggaggag gaagaaaggt tagggagtcg gccatgggat gcttttcatg ctgctgtgtg 180

gcagatgacg acaacgttgg caggaggaag aagcatgacg atccctatgt tcctatccct 240

gctcatgttt ataattttgg acctagccgg ttcccagccc caaccctgt catctccact 300

ggcacagctc agccaattgc agtaccggcc agtcatctgg aagagctgaa ggaaattacg 360

aaaagacttc agcagtgatg ccctcat 387

<210> 1871

<211> 351

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C8

<400> 1871

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ctcctggggc ggctgcact gggagcggca gatccgtgcg tccgcgcgcg cgaggcggcc 120

ccccgggtcc gccgctggcg ctgggatgtg ggtgctggtc acgggcgcgcg cgggcttcgt 180

cggtagccac tgctccctcg cgctccgcaa gcgtggcgac ggagtcgtcg gcgtcgacag 240

cttcaacgcc tactaccatc cgctcgctcac gaacgcgcgc atggcgctgc tggcctccca 300

tgggtgtcttc gtcgtcgagg gcgacatcaa ggacggccgt ttcttgtgca a 351

<210> 1872

<211> 341

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C9

<400> 1872

catataagct caacaacagc cagctcgcga aaataatgaa tagccgcagc atggcatcat 60

cggccgcgct cttggtgcta gccctcgcgc tagtggcggc caccgcccc aaggtagcgg 120

aggcaaagaa gaagagagcg gcggagagcg gcgaggcggc ggaggcgaag aagatccagg 180

acgacttctg ctcgacgctg tgcgagggca ataaggggac ggacctgggc gtgtgcaaag 240  
 agtcctgcgc gctctcccag cagtccaacc tgggtgctgta cggcaggatc cagtgcaagg 300  
 gcaaattgcac cgagcagaag ggcattcacgg cgccggccat g 341

<210> 1873  
 <211> 251  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-D1

<400> 1873

aaacccaaca cagaaacaca gactagaaaa agaaaaaaaa actataacca caaaataaaa 60  
 aaaaaatcca aagacagcag cagaaagggg caacccccca agggatcaca tccatctcaa 120  
 catgtccgtg ttcgctaaca ctcttcaat cttgtccctt aaattcactt cacgggcctt 180  
 cgttttaaac tttcgtgctg gggaaaactc tgtagttccc caatttagtc cttttggaga 240  
 acacccccctt t 251

<210> 1874  
 <211> 266  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B4

<400> 1874

gcgtccgaca cgagtccgga ggaggtggcc aaccccatcg tcatcgacca gtacttctgc 60  
 ccgcagaagg tatgccctgg caagcggagc aactcctcgc atgtctccgt caaggacgtc 120  
 acgttccgca acatcaccgg cacgtcatcc acgcccaggg ccatcagcct gctctgctcg 180  
 gagacgcagc catgcagcgg cgtctccctc atcgatgtca acgtggacta cgccggcaag 240  
 aacaacaaag ccatggccgt ctgcag 266

<210> 1875  
 <211> 458  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H4

<400> 1875

tcgtggctgg ctgcgccacg acctctcctg ctgtcgctgc tggtcgccgt gctagcgggtg 60

gccgccgatg tcgccaacgc cggccacgcc aagcccctga cgcctggcgg gcgtgtggta 120

cacgacaacc acggcaagtt cacggccggg ccgtggaaac ccgccacgc gaccttctac 180

ggcgggcggg acgggtccgg caccacggcg ggcgcgtgcg ggtacaagga cacgcgcacg 240

caggggtacg gcgtgcagac ggtggccgtg agcacggcgc tgttcgggtga cggcacggcc 300

tgcggcgggt gctacgaggt gcggtgcgtg gacagcccta gcgggtgcaa gcccacgcg 360

gcggcactgg tggtgacggg gaccgacctg tgcccgccca aggaccagtg gtgcaagcca 420

acgcggggagc acttcgacct cagcatgccc gcgttcct 458

<210> 1876

<211> 351

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-A1

<400> 1876

atccgacgaa acacgcgtcg acctagtcgt cgtcgccctc ctccggcctcg ttttcgcagg 60

catgggttca gaactcgtca ttgttgtagc atcagacacg gtgtagatag catcaacgtg 120

gatgctggta ctaatcatga attcatcact tgtcttaatc aagatcacac ctgtgggaat 180

tctgacatct atacatatcc tgatgcgtgt tatcgcccaa aatcttcctc ctgagtccac 240

tacactcgag aacgtcatca ctcagtgtcc tcaatgtgcc tcggtataca ctccaattct 300

tgatgctctt cacacagtgc atgatgggaa atttttacat ttgactgttc t 351

<210> 1877

<211> 320

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-A12

<400> 1877

ctggaaaccc gatgccgtct acattccaa cgtccaattc tactagactt tgaattccct 60

tcgattcatc cggcacagcg ggctatggac cttcagcagc aagctaatta agttggcagc 120

atgcaccgct aaccttatat actactgaga cttccaaatt ctagtatatg taatcctttt 180  
 gttcgggttc atgatcgaat tccaaagagt ggaaaacaag caaaagggtta aatatacatg 240  
 ccatttttgg aggcatTTTTT ttcattgagg catgttttoga tatatggacc actaaatata 300  
 catatcattt acttttctac 320

<210> 1878  
 <211> 186  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-A5

<400> 1878

acgcgtccgc ctgctcctcc tcgccatctt catcccggt atcaccaccc ccgtcgaggc 60  
 ccacattctc gccaggtgt ttggcgacga ccaattccaa cgggcagggc aaccagctgc 120  
 acctcacgaa catctcccag gccttgccga tgctcccgag ggtgacaacg ccgcgcgaac 180  
 tgctgc 186

<210> 1879  
 <211> 282  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-A6

<400> 1879

acgcgtccgc acacgcgtcc gccacgcgt ccgcaagaac gcaatggccg ctctttacaa 60  
 tgagcttgag gaagaacgga gcgcttcggc ggtcgcggt agccagacga tggccatgat 120  
 caatatgctg cacgatgaga aggctgcaat gcagatggag gctctgcagt acctgaggat 180  
 gatggaacag catgctgacc accaccacct ggcgattcag gacctgcacg atttgcttac 240  
 cgagagggag aaagagttgc ttgactttgg cgctgagctc gc 282

<210> 1880  
 <211> 411  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-A8

<400> 1880

cgggccaccc acgcatccga gtaggtctgc catcaatgga aagccgggaa ctcataatgc 60  
ggcgacttct gtcaaaggag aaagttgatg aaaggctgaa cttcaaggag ctagcaacca 120  
tgacagaagg atatagtgga actgatctca agaacctgtg cacgacggca gcatatcgcc 180  
ctgtgaggga gctaattccag aacgaaagaa agaaggagct ggagaagctg aagcgtgaaa 240  
aaggagaaac tccatcggat cttccgaaga atgaagagac catcaccta atgccgctga 300  
gcacggcaga tctgaatgaa tcaacaacc aggtggatcc atgccttacc aagtgcatt 360  
tgccacgatg cggatgcaaa ttaacacttt tcaacttgag aaatagggtta a 411

<210> 1881

<211> 245

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-A9

<400> 1881

ctgcaaatag gtccatgcac ccctcctcc ttcttgacac aaatccccctt tgtaatgaat 60  
taaccatgca tgcattgatg catgtatgca tgccccgggtg gttacgtgtc attcagctca 120  
cgcgctgacc gagtctatac atacgtcgtc accggctggc cacgcatgag ataaccatct 180  
gatattgacc ggactatata atgtattcct aataatcctg cattttccaa gctaattgtt 240  
ttttt 245

<210> 1882

<211> 386

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B12

<400> 1882

atgatagtga tgcaccgca cgtgaaggcg gagaacatgc tgctggaccg gaagcggacg 60  
ctgaagatcg ccgacttcgg cgtggcgcg cgtggaggcg agagctgca ggtgacgggg 120  
cagacgggca cgctgggcta catggcgccg gaggtgctgc aggggaagcc gtacgaccac 180  
aagtgcgacg tgtacagctt cggcatcctg ctctgggaga cctactgctg cgccatggcc 240

taccccaact acagcctcgc cgacatctcc taccacgtcg tcaagctggg catccggccg 300  
gacatcccgga ggtgctgccc gcgggcgctg gtggagatca tgacgcggtg ttgggaccgg 360  
aaccgggaca accgggcgga gatgtc 386

<210> 1883  
<211> 378  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B2

<400> 1883

ggggccacgc acgcgtccgg agacactgtg ggccgtctcc atgggcggcg gcgtgctccc 60  
cggcaggtcg gacatggacg gccccgacgg cgagatggcg tacatgcgcg ggagcttcga 120  
gcacaccgtc ggggtccggg actcggagtc gctctacatg gtcggaccgc ccggcggcga 180  
ctgcccggag ctgcgccatct tcttcgttag gctatgaatt gaaccgagcg aaccatacga 240  
atcgaacaat acagtgtaca cgtcgcagtc gtgggggtcta atctctcgcc tgggtctcgtt 300  
cgttgttcag cagcctcagc tatcgtcaga gatattactc atttgcccca aaaggaaagg 360  
gaaaaggcg ggcgctct 378

<210> 1884  
<211> 275  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B3

<400> 1884

gggtccatcc acgcgtctaa agaaaatcga atcaacaaaa acaatgaata acaacaaaca 60  
cagaaattaa aagatgacga attcagacac agaataacgc aaaagggggc ggccgtacta 120  
taagatcaaa acttaggtca ccatgcatac aatctcatac atcttcgaaa aggtccccgc 180  
aatccaatc cactggacgt ctattataat cctccagcac gggaaaaccc tgctctcacc 240  
taacttacgc gctttgcacc atacccccct ttcac 275

<210> 1885  
<211> 309  
<212> DNA



<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H12

<400> 1885

gtcgtataga gccgcctcgg cgactccgtc agcatcccg c tgccgcgcgc gccgcgctcc 60

gagatggcga gggaccagga ccgctgatac agcgaccact gggggccgccg cgcctacgac 120

tccgtctcgc tcagcagcga ctccatgccc gtcctcacgg gacgcacgcc cgtcgagtgc 180

tacagctcct tcattcgcgc gttccgccac cacttcgcca cgcacctcgc cagcacgatac 240

tccggcgatct aggtcggcat gggccccgcc tgcgacctgc gctacctcgc gttctcggcg 300

agcaacggc 309

<210> 1886

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G12

<400> 1886

tccggaaaca atgggtgata ttgagaatca taataatcca attcaattca atgaccgccc 60

ctggatagag tcccctaact cgtggagatc actatgtgtt gtcacgcaat cagactgtca 120

tgctctgtca cacaatgctg acatttgcaa ccttcttgag agaaaaaagg tctcaaagtc 180

tcttgagagt gacttcagca ataaaatgaa ccagctgttg ctaacagctc tgcaaaaaca 240

aaggcaacaa cggatgatgg atgactttgg aggatactat gatgaacgca tgtactggag 300

acaaaatgat gaaattcgtg atgctgataa ggaggcatct gctccatgtt cattagcccc 360

tgctgcacat cttggagctc atcagcaaga gagttggcag cattcttcat ttggaagtca 420

acatcaacac cagcataaac aaaa 444

<210> 1887

<211> 85

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G9

<400> 1887

cggttcgacc acgagtccgg gaaaaacagc agcctcgaat aagagccagc cagagagtct 60  
aatagatctc tcaccgcctg ccatac 85

<210> 1888  
<211> 345  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-E12

<400> 1888

tcgtataaca gtaccagag agccatggcg ggtcgtcctc ctgcgcgtca cggactttga 60  
ctccttctcg ctgcgcaaag aacgcgaggt ccagctgcag cgcggcgcaa ccgggacgtg 120  
gcgataaagg cttgatgaac ggcgagcctg acacaggacc tcggaatgca acagtgtcca 180  
tgaccggcga cgttcgtgcc gatggacaac tgccccaatg agagcatcca gttttccaga 240  
tgcaatgcca gagtaaagtt cagtagtggg aactgcacgg atgacctcgg cgagatcagg 300  
agcctgtcgc tgaataaagt tccggagtag ctgtcgcttg catgc 345

<210> 1889  
<211> 447  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-F1

<400> 1889

agccgaaggc ctcgtgcctt ctcttctctc ctggcatgga ggaagtagct gtttcgccta 60  
tgatcgttgc cgccgtagtg ctggacaaca atggcgctga cgcggtctcc tgcactgcca 120  
tccttagcgt aacaataagc ctagaggaga aagaaaatat caatggggat gttccacga 180  
tcacctcggc cgcaagcaac gaggaggagg cgttggtcag tgcggagaa tccaccaagg 240  
acgatggcca tcgcttgacg atggaatgct ccaactccgt ctctctcagt agcccttcca 300  
ctcgcaagaa gcgcggggcg ttcagcctct tcagggcgat gttcctgtcc ttcggccgga 360  
gcgacgacag catgaagaag acagacgacg acaacacgag ccccaagaag agagccatcg 420  
cggctgctga tgacgattgc aagcctg 447

<210> 1890

<211> 313  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-049-Q1-E1-C4  
  
 <400> 1890  
  
 accacgcgta cgccctagcg tccgaatgga cgtgtcagac gtatcgtgct cgactcggga 60  
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 cgccttgatc tggccgggtcg cgacctcacc gactacctga ttacgatcct gactgagcgc 180  
 ggctactcct tcatcaccag cgctgagcgg gaaatcgtga gggacatgac tgagaagctc 240  
 gcctacatcg ccctgcacta cgaccaggag atggagaccg cgaagaccag ctcttcctgtg 300  
 gagaagagct acg 313

<210> 1891  
 <211> 183  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-049-Q1-E1-D4  
  
 <400> 1891  
  
 tgcacggacc gtgggcgaca ccgtgcaaga cgcgtgcagc aagacacaat tctccaggat 60  
 ctgctgggac agcctcagcg cacagccaga gagccagaag gccaacccgc gccggctggc 120  
 ggagctgttc gtgaacatcg gggcccagaa gggatccggg atggccacgt tcgtgcacgg 180  
 gaa 183

<210> 1892  
 <211> 251  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-049-Q1-E1-D5  
  
 <400> 1892  
  
 actccctata gaacgtcgta ttatggaggc gatgtctagg ccggagatgg tcgacaagga 60  
 ggtgggggatg cagtcattcc tgtgcagccg ggtgaatgac agcgatcggc ccgcggtcat 120  
 ggtcgtgca ggggcggcgc cgtcaggtgg gtcggagcag cgacgttatg tacgcgccac 180

tcaccaggct gatgcgcgag cgccagggtgc agcaggggtca aggcgctctg tctgtgcggt 240  
cgagactgtc a 251

<210> 1893  
<211> 335  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-E1

<400> 1893

gggtggcggc cgccatcacc ggctccgatt ccatcatcac cgctaccgc gagcactgta 60  
cctacctcgc ccacggaggg gacctcgtct ccgcgttctc cgagctgatg ggccgctagg 120  
gcggttgctc ccgcaggaat ggcggttcca tgcatttcga taggaaggat gccaatctct 180  
acggcaggca cggcatcgtc tgcgcgcgcatg tgcccgtcgg atggggcctc gccttcaccc 240  
agaagtacag gaaggatgag acggccacgt ttgccctcga tcgtgacggg tgcggtgtaa 300  
gcagggacag ctcttttatg ctctcaagat ttcgg 335

<210> 1894  
<211> 469  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-A9

<400> 1894

ccgctcaaca aagatagcat agcagcagca ctcaaatag caaaaaccac catccgtcgt 60  
cgccaaccgt agcaaggagc caaggacatc accaccgccc agcaataatg gcgcagagca 120  
tgaggattgt ggcgctggcc ttggtggccc tgctggtggt ggcgggcggc gcgcccgtgg 180  
ccaccgcgta cggctgctac gacgactgct acgagcgctg cgccaacggc aagaaagacc 240  
ccgctgcac caagatgtgc aaccaggcgt gcggtccac ggaccagggc gccggtgccg 300  
ccggcgccgc gccggttga tcgcccagcg cattcatcgc ttcagctcga tataatcgt 360  
gctccgtcag caaccacat atgattcgat caatcttct cctctaattt ctgaccccg 420  
tcgaattttt ttcttttcta ttcttctact atactactat tatctgttt 469

<210> 1895

<211> 502  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-049-Q1-E1-B1  
  
 <400> 1895  
  
 ggtccggtag tcccacgcgt ccgccaagc gtccgcgaag ccgaaggcct cgtgccttct 60  
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 ggacaacaat ggcgctgacg cggctctcctg cactgccatc cctagcgtaa caataagcct 180  
 agaggagaaa gaaaatatca atggggatgt tcccacgata acctcggccg caagcaacga 240  
 ggaggaggcg ttgttcagtg tcggagaatc caccaaggac gatggccatc gcttgacgat 300  
 ggaatgctcc actcccgtct cctccagtag cccttccact cgcaagaagc gcggggcggtt 360  
 cagcctcttc agggcgatgt tcctgtcctt cggccggagc gacgacagca tgaagaagac 420  
 agacgacgac accacgagcc ccaagaagag agccatcgcg gctgctgatg acgattgcaa 480  
 gcctgccggt gacgagtcaa cg 502

<210> 1896  
 <211> 430  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-049-Q1-E1-B11  
  
 <400> 1896  
  
 ggggtggacca cacgtccggt taacctctc ttgcattgca ttgcaggctg tagttgagca 60  
 gcagcaacca ctgcacagga tgtcgtggca gacgtacgtc gatgagcacc tcatgtgcga 120  
 gatcgagggc caccacctga gctctgccg catagtcggc cacgacggcg ccgtttgggc 180  
 ccagagcacc gcattcccac agttcaggcc acaggagatg accaacaatca ttaaggactt 240  
 cgacgagcct gggtttcttg ccccgatcgg cctcttccct ggccccacca agtacatggt 300  
 catccaaggc gaccccgggc ctgtcatccg cggaagaag ggatctggat gcatgactgt 360  
 caagaagacc ggacaggcgc tggatgatcg catctacgac gagcccatga gcccgggaca 420  
 gtgcaccatg 430

<210> 1897

<211> 341  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-049-Q1-E1-B12  
  
 <400> 1897  
  
 tccggttaac ctctctttgc agtgcattgc aggtcgtagt tgagcagcag caaccactgc 60  
 acaggatgtc gtggcagacg tacgtcgatg agcacctcat gtgcgagatc gagggccacc 120  
 acctgagctc tgccgccata gtcagccacg acggcgccgt ttggggcccag agcaccgcat 180  
 tcccacagtt caggccagag gagatgacca gcatcattaa ggacttcgac gagcctgggt 240  
 ttctggcccc gatcggcctc ttccttggcc ccaccaagta catggtcac cagcgcgagc 300  
 ccggcgctgt catccgcggg aagaagggat ctggaggcat a 341

<210> 1898  
 <211> 180  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-049-Q1-E1-B4  
  
 <400> 1898  
  
 cacaagaaca aatacctcgc caccaacaat ggcctccaag tcctccatcc tactttgcac 60  
 ggcgatgctg gttgcgctgt ttgcggttgg tttgtgcacc ancccgtca cttccangt 120  
 tggcaaggga ttcaagcctg gccacctgat cctcaccccc aatgttgcaa ccatatctga 180

<210> 1899  
 <211> 398  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-048-Q1-E1-H2  
  
 <400> 1899  
  
 gtcggccac gcgccacaa tgacacgcgc acgcaggggt acggcgtgca gacggtggcc 60  
 gtgagcacgg tgctgttcgg tgacggcacg gcctgcggcg ggtgctacga cgtgcggtgc 120  
 gtggacagcc ctacggggtg caagcccacg gcggcggcac tgggtggtgac ggtgaccgac 180  
 ctgtgcccgc ccaaggacca gtggtgcaag ccaccgcggg agcacttcga cctcagcatg 240

cccgcggttcc tccagatcgc gcaagagaag gccggcatcg tgccgatctc ctaccgcagg 300  
 gtggcggtgcg tgaagcaggg cggcatccgg tacaccatca ccggaacaa gtacttcaac 360  
 atggtgacga tcaccaatgt gggcggcgct ggcgacat 398

<210> 1900  
 <211> 434  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-048-Q1-E1-H4  
 <400> 1900

cgggccaagc ctctagttca aggcgcatga ggtctacaag atctgctgctc tggacatacg 60  
 gctcgccaac gccgatcgcc acgccgaaa cataactcgtc cgcaagcacg acggcggcgg 120  
 aggcggaggc atgtcgctgg ttcccatcga ccatggatac tgtctgccgg agagcttcga 180  
 ggactgcact ttcgagtggc tctactggcc tcagtgcctg gagcgcttca gcgacaagac 240  
 tgttgtatac gtgctgacca cactgtctga ggaggacgtg actatgctga ggctccacgg 300  
 gtgggacgtg tcgcgcgagt gcgcgcgcac gctgcgcgtc gccaccatgc tgctgaaaaa 360  
 ggggtgtggag aagggcctca cgccttccac atcgggagca tcatgtgcag agagaccctg 420  
 gacaaggggt cccc 434

<210> 1901  
 <211> 323  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-048-Q1-E1-H6  
 <400> 1901

cgcggggcca tacacgagtc tacacagacg ttctgggata ccgtatcgcc gatgatgtca 60  
 tccccgccga tttcaaggcc ggcaccacct acaagaccac tctcagcatc tgatgagcct 120  
 gtgatgagtg atgacgaata atatttccag tccacgtgtc aacgagccaa tattttaattt 180  
 ttttcctatg tttattttgt ggcacaacac catctcttca tgtgccttgt tgtgttggat 240  
 tgattttatt acatgaattg aatacaactgt ttattttaaga ttcttttggg tgaaatatag 300  
 tgttcgggtc tatttttcaaa agg 323

<210> 1902  
 <211> 412  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-H7

<400> 1902

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 tcgcgggcgc tgtacgagcg ggcctcgtcc gcggacaagt ccctcaagct ttacgacggg 180  
 ctgctgcacg acctcctgat cgagcccag aaggacaggg tgatggacga catcgtcgcy 240  
 tggctgagcc ccaggggtctg acgccgccgg cgcgttgccg tgctggccgt aggacgcgag 300  
 cggcttttcg accatctgca ggccaaggac gcctcgccctc cggatgggtg gtgatgacgc 360  
 ggtctggtct ggtaggctgc gggccgacgg agagcgggtg tggcttctcg cc 412

<210> 1903  
 <211> 320  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-A12

<400> 1903

acaccctata gaacgtcgta ttacctcaa taagagccag ccagagaaaac taataaaaact 60  
 ctgcccgcgc ccatccgagc gaacaagcca accgaccccg tccccaaggc aatccgcccgc 120  
 cgacgtacca ccaccaccgc aggagcgaga tggagatgaa gaggatcctc ttcgccgtcc 180  
 tcgtcgatcat cgccgcctcg gccaccgcag tgctggcctc caccgaagcc gccgccgcgg 240  
 gcgccccaac tgctccgag tcagccgcgc aggtcccccgc tgctcgcgcg gctatcgctg 300  
 ccgctggcgc ggccgccgcg 320

<210> 1904  
 <211> 505  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations



<223> Clone ID: LIB148-049-Q1-E1-A3

<400> 1904

gtcgacccac acatccgcct aactgcggt cgtccacatc cttttctctc ctctcgccg 60  
gccaacctg attgttcttc aaccaagagg aagaaaggaa ggaagggacc ggaagcatca 120  
gccatgtcga actcggcgtc gggaatggcc gtctgtgatg aatgcaagct caagttccag 180  
gagctcaagg caaagaggag cttccgcttc atcgtgttca agatcaacga gaacgtgcag 240  
caggtggtgg tggacaggct gggggggcca ggagagagct acgacgcctt cacggcctgc 300  
ttccccgcca acgagtgcg ctacgccgtg ttcgattttg acttcgtcac tgacgagaac 360  
tgccagaaga gcaagatctt ctttatctct tgggccccgg atacatcgag ggtgagaagc 420  
aagatgctgt acgcgagctc caanggacgg ttcaangang agctggatgg cattcaggtg 480  
gagctacaag caaccgaccc gagcg 505

<210> 1905

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-F3

<400> 1905

gccgacccaa gcctctacac agacgtcgta gtagagagtg cgtgcgtgca gccacaggca 60  
ggcgtcggca ccatgtcttc tttcaccggc acgcaggaca agtgcgcgga gtgcgacaag 120  
accgtccact tcatcgacct cctcacggcc gacggcgtea cctaccataa gacatgcttc 180  
aagtgcagcc actgcaaagg gatectctcg atgtgcagct actcttccat ggacggtgtg 240  
ctgtactgca agaccactt cgagcagctc ttcaaggaga cggggagctt ctccaagaac 300  
ttcacgccag gtggcaagtc ttcagacaag ggtgaactga caagggcccc cagcaagcta 360  
tcatctgcgt tttctggtac tcaggataag tgtgcagctt gccagaaaac agtg 414

<210> 1906

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-F9

<400> 1906

gcgcgggtcg atacaacaac ctaaactgac gtcgtgagta gagcgatctc ctctccctct 60

ccctctccga tccattctcc agcgcagcga agtaaacaatg tctgaccggg caaagatgtc 120

gtggcaggcg tacgtggacg agcacctgat gtgcgagatc gagggccacc acctcgcggc 180

ggcggccatc gtcggccact acggtgccgc ctgagcgcag agcacggcgt tccccgagtt 240

caagaccgac gacatggcca acatcatgaa ggacttcaac gagccagggc acctcgcgcc 300

gacatgcctg ttcctcgggc ctaccaagta catggtcatc catggcgagc ctgggtgccgt 360

catccgtggc aagaagggat caggaggcat caccgtgaag aagacagggc aggcactcgt 420

ggttggcatc taccacgacc cgatga 446

<210> 1907

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-G11

<400> 1907

gcgggtcggtt acaatactct acagtgagtc gtactaccat caccaccacc aagctcaaca 60

acagccagct cgcgaaaata atgaagagcc gcagcatggc atcatcggcc gcgctcttgg 120

tgctagccct cgcgctagtg gcggccaccg cccacaggt agcggaggca aagaagaaga 180

gagcggcgga gagcggcgag gcggcggagg cgaagaagat ccaggacgac ttctgctcga 240

cgctgtgcga gggcaagaag gggacggacc tggtcgtgtg caaggagtcc tgcgcgctct 300

cccagcagtc caacctggtg ctgtacggca ggattcagtg caagggcaag tgcaccgagc 360

agaagggcat cacggcgccg gccatgaagg tctgccaaga agagttccac aaaggcttcc 420

ttgttaaagg cggcca 436

<210> 1908

<211> 350

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-F2

<400> 1908

cgcgctctgcc cacgcttcct gggtagctaa gaagtcgtct aattcttgga tcgaattaca 60  
cgacttcttc gtccctctct tcattaggag gctaacttgt catctgcagg atctgtgggg 120  
tgacttgatt tagttatgga cttactggta cgcgctctga aagttcttct ggttcggcgt 180  
atatgacttg cccaccgca ggcacgaggg tgcgatccgt atctcgtcct gttgcttcac 240  
atcatctgtc ggcacatgtg agttgagaag cgatgcgtgt gatccttacc gcaggatgca 300  
ggagcatctg actgtcatag atcgagctt accatgtgaa tctggaggtg 350

<210> 1909  
<211> 415  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-048-Q1-E1-D5

<400> 1909

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tgaagtgcga cgtggatatt aggaaggatc tgtatggcaa catcgtcctc tccggtggta 120  
ccactatgtt ccctggcatt gctgacagga tgagcaagga aatcacgcc ctggctccta 180  
gcagcatgaa gatcaagggtg gttgctcctc cagaaaggaa gtcaccgccc tggctcctag 240  
cagcatgaag atcaagggtg ttgctcctcc agaaaggaa tacagtgtct ggattggagg 300  
atccatcctg gcatcgtcga gcaccttcca gcagatgtgg attgccaaagg ctgagtacga 360  
cgagtctggc ccgtccatcg tgcacangaa atgcttctaa ttctttgggc ccaag 415

<210> 1910  
<211> 122  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-E2

<400> 1910

gctccaccgc ctccggggcc gacgacgcgc tgctgtcctt ttcccgccac tcccaatcca 60  
tccccgatct ccaagttatt cctgttctct ttcagaattc gttgcatcaa ccaagcaag 120  
at 122

<210> 1911  
 <211> 412  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-E8

<400> 1911

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ctcgcgggtc gatacaagcc tctagagtga atcgtcacia atcttgctgg ggataggcgt 60
aggaccgtta tgaggccacc acaagttctt agggagggaa caaagaagac agtttttggt 120
aactttatgg atttgtgtaa aacgatgcat aggcaacctg agcatgtgat gatgttttta 180
cttgctgaaa tgggaacaag cgggtcactt gatgggcagc aaaggttggt gatcaaagga 240
agatttgccc ccaaaaactt tgaagcaatc ctgaggagat acatcaatga gtacgtcatc 300
tgcaatggat gcaagagccc tgataccatt ctgtccaagg aaaatcgtct gttcttcctt 360
cgctgcgaac agtgtggatc ttcaaggctc gttgctccaa tcaaagctgg at 412
```

<210> 1912  
 <211> 438  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-E9

<400> 1912

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tcgcgggtcg atacacgcct ctagactacg tcgcgggtacc acgaagtggc ctagggacga 60
cgataaacc c atttggtgcg taccatgtag tgtcttctgc tgccctttac ctgcactccc 120
gggccacggc catgggcggt atgccatttg gtcccgggaa tggcgtcaag gacgatcatc 180
cagcagccgt cacgtcgctc gtgagcggcg cgagcgggtga cggattgagc gtggacgagg 240
cttcgttcgt ggccacgacg agttcgggtga cctccatggt cgcggcgaag gaggagacgc 300
ggcaagccgt tgcggatgat ctcaactctt cgagatcttg cccttgcgag tggttcgtct 360
gtgaggatga tcagaacagc acgatatact tcgtgggttca gggctcagaa tcaattgctt 420
cctggcaggg caaccttt 438
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<210> 1913  
 <211> 390  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-F10

<400> 1913

tacaacaccc taaactgacg tcgtattaag cgtcggcca cctcgtctc accctccctc 60  
cctcacacaa ataataagga aaggccccgc ccttttctc cgacatccac aggggggagg 120  
ggaaaacacg tgcattcacc cggcggaat aatggcctcg gttccggctc cggcgacgac 180  
gaccgcccgc gtaatcctat gcctatgctg catcctctcc tgtgccgagg ctgacgaccc 240  
caacctcccc gactacgtca tccacggccg cgtgtactgc gacacctgcc gcgccgggtt 300  
cgtgaccaac gtcaccgagt acatcgagg cgccaagggtg atgctggagt gcatgcactt 360  
cggcaccggc aagctccaac gccccatcga 390

<210> 1914

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-F11

<400> 1914

gcgcgggctg atacaagact ctaaaatgag tcgtattaaa cctttctccc tctccacct 60  
ttctcctttt cttgccacgg caaaacacct tcgcggcgga gagcatggcg atggcgtagc 120  
gtgtcctgga ggtcacctg gtgtcggcaa atgacctcaa gaaagtgtcg ctcttctccc 180  
ggactcgcat ctacgccgtg gtttccatct ccggattcga cctccgcac cttcccaca 240  
gcaccaagc agaccacagc aacggctgca acccctgctg gaacgccgtg gtacacttcc 300  
ccatcccggc tgcgctgac acccgggcc tcgcactcca cgtgaggctc cgcgccagc 360  
gtctatacct gggcgatcgc gacatcgagg aggtgtttgt gcccatcgac gacctcct 418

<210> 1915

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-D3

<400> 1915

ggtcgaccca agcctctaaa ttgagtcata tgagaataaa tagttcgtga atccctgaag 60

cgtgcatata tatattcctg ccaagataaa ggtaatggag tcgtcacgca ggttccagcc 120  
 ggccgtcatc ctgcttctcc tgctcattgt gtccaccgat atggcacagg caagggaatg 180  
 cgagaagtac agtgagcgat ttgttggggc atgcatgac gcagacaact gcgccaatgt 240  
 gtgccgcggt gagggcttct tggccggcag gtgcagcacc ttccgccgcc gctgcatctg 300  
 cactaagcag tgctaaacaa gatcgctcga tcgttcgcca tgcatcgaca acctattctt 360  
 aataacgttc attatctcgt tcttatttat gacgaatgtc atgtatgttc tggtgactgt 420  
 catgt 425

<210> 1916  
 <211> 399  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-048-Q1-E1-B7  
 <400> 1916

gcccgggccg acacacgact ctagatcgac tcgaagtaca tgtaccggtg caaggacatg 60  
 ctgatcaacg acgtgaccgt gacggcgccc ggggacagcc ccaacacgga tggcatccac 120  
 atgggcgact catccgggat cagcatcacc aacaccgtca ttggcgctcg cgacgactgc 180  
 atctccatcg gccccgggac ctccaagggtg aacatcaccg gcgtgacctg cggccctggc 240  
 cacggcatca gcacggcag cctagggcgg tacaaggacg agaaggacgt cacggacatc 300  
 aacgtcaagg attgactct taagaagacg atgttcggcg tccgcatcaa agcgtacgag 360  
 gacaccgcct ccgtgctcac cgtctccaag atccactac 399

<210> 1917  
 <211> 441  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-048-Q1-E1-B9  
 <400> 1917

gcgggtcggtt acaacactct agactgagtc gcaataccga aggcctcgtg ctttctcttc 60  
 ctccctggca tggaggaagt agctgtttcg cctatgatcg ttgccgccgt agtgtggac 120  
 aacaatggcg ccgacgcggt ctctgcact gccatcccta gcgtaacaat aagcctagag 180

gagaaagaaa atatcaatgg ggatgttccc acgatcacct cggccgcaag caacgaggag 240  
gaggcgttgt tcagtgtcgg agaatccacc aaggacgatg gccatcgctt gacgatggaa 300  
tgcaccactc ccgtctcctc cagtagccct tccactcgca agaagcgcg ggcgttcagc 360  
ctcttcaggg cgatgttcct gtccttcggc cggagcgacg acagcatgaa gaagacagac 420  
gacgacacca cgagcccca g 441

<210> 1918  
<211> 391  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-C10

<400> 1918  
tcgcggtcg ttacaaccct ctagaatgat tcgtactacg atgcgggcac aggttgcgat 60  
ggttgtggcg ttggtgttct tggtgagagg cgcattggtgc ggtcctccca aagtcccccc 120  
aggcaagaac atcacggcca cctatggcaa ggactggctg gacgctaaag cgacatggta 180  
tggcaagccg acgggtgccg gtcccgcaga taacgggtggc ggctgcgggg acaaggacgt 240  
gaacaagccc ccttcaata gcatgggcgc atgcggcaac atccccatct tcaaggatgg 300  
tctgggttgt gggctctgct tcgagatcaa gtgcgataag cctgtggagt gctccggcaa 360  
gcccgtggtg gtgcacatca cggacatgaa c 391

<210> 1919  
<211> 421  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-C9

<400> 1919  
gggtcgacac acgactctac atcgctgcct gccagggaga ggggaagtca gaggcacgga 60  
gtggcgcaga gcagacgccc gtgaaccatt gtagctgtcc ctgtcgctgt cgtcgtcaac 120  
gaaccacac aaggaaagga tggagaagaa gccgaccatc ctcataaaca ggtacgagct 180  
cgggcgcacg ctggggcagg gcaccttcgc caaggtgtac cacggccgga acctcgcgtc 240  
cggcgagagc gtggccatca aggtcatcga caaggagaag gtgatgcgcg tcggcatgat 300

cgaccagatc aagcgcgaga tctccgtcat gcgcctcgtc cgccacccca acgtcgtgca 360  
gctgcacgag gtgatggcca gcaagagcaa gatatacttc gccatggagt acgtccgggg 420  
c 421

<210> 1920  
<211> 347  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-048-Q1-E1-D1  
<400> 1920

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cgcgaggagct ccggctccgg gccccaccag cggctcctcc gccgtcgcgc ccgccgtcgg 120  
cgccgccctc ggggcccgtg tcgcctcgtt cttcaacgac tacattcact gagcctcgtc 180  
gcggccggtc gctcggaggc cgtgcgcgct acgaaacggg atatagagtc tcatcgctgc 240  
acgcattccg atacgtgggc agctcttcga ttcgagacat cttgtgtccg cattggcgga 300  
ttcagcccgg tatccctcag taacctccat catgcatggc ttgtcat 347

<210> 1921  
<211> 417  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-048-Q1-E1-D10  
<400> 1921

gacacacgcc tctacagtga ctctgtctag tcgtcgtctc actcaccccg ccttcacgcc 60  
tccctcacca aataagggtc cgcccttttc cgacattcac agggggggaca ggaaatcagc 120  
ggccatggcc tcgattccgg cgacgacctt cgccgtcctc ttatccgtcc tttctgtgc 180  
cgcggttggc accgccgtcg acaacgacct ccccgactac gtcattccagg gccgcgtcta 240  
ttgcgacacc tgccgcgcgg ggttcgtgac caatgtcacc gagtacatcg cgggcgccaa 300  
ggtgaggctg gagtgaagc acttcggcac cggcaagctc gagcgctcca tcgacggggt 360  
gaccgacggg aacggcacgt acacgatcga gctcaatgac agccacgagg aggacat 417



<210> 1922  
 <211> 337  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-048-Q1-E1-D2  
  
 <400> 1922  
  
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 actaaatddd gttgataata atggcaagtg cttcctggag atgagttact actttgagat 120  
 tagaaaggag tggccaggaa ctcaatgatg tgtggacgga ccagcatggc tgactcgtcg 180  
 gagtatgtta gagctcatag ctaagccaag cacaagatgt ggactcatct tcaagaatga 240  
 ttcatcgtct acttcatcgt taatcgcatt ttaatttggt ttgaattgtc attgtacgtc 300  
 gtttatgaca taaaactggt tattcatcac atatata 337

<210> 1923  
 <211> 429  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-048-Q1-E1-B6  
  
 <400> 1923  
  
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 catgggagac tcatccggga tcaccatcac caacaccgtc attggcgctg gcgacgactg 120  
 catctccatc ggccccggga cctccaaggt gaacatcacc ggcgtagacct gcggccctgg 180  
 ccacggcatc agcatcggaa gcctagggcg gtacaaggac gagaaggacg tcacggacat 240  
 caacgtcaag gattgcactc ttaagaagac gatgttcggc gtccgcatca aggcgtacga 300  
 ggacgccgcc tccgtgctca ccgtctccaa gatccactac gagaatatca agatggagga 360  
 ctcagccaac cccatcttca tcgacatgaa gtactgcccc aacaagttgt gtactgccaa 420  
 cggcgcctc 429

<210> 1924  
 <211> 435  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-048-Q1-E1-A11

<400> 1924

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gggggacgcg gagatcgacg tggcgccgct ggtggaggcg gcgaacgcga gcccggaggc 120  
gagcctgagg aacggcgcca tcacacctgtc ggtgcggccg agcgccacga actgcctcgc 180  
cgacgagagc cacgtgtgct ggaggaacgg caagttcgcg caggacatga tcctccgcct 240  
caggaacgtg gagagcgggg agattcagct gcagctgcag tgggtcagca tccctcctgc 300  
tgcagccagc aggtgaagga aggaagaaca ggcgacacga agcaatcgca ttttcacctc 360  
ttgtgaatgt cggattgtaa acttaatggg gtctgggtca gtcagggtag ttcattgtgtt 420  
gcctattaat gtaca 435

<210> 1925

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-A12

<400> 1925

acaaccctct atattgagtc gttcacttgg tggccacact aggcattgtct ctcacaattc 60  
caatagcaat ggttgctgat atgatcatcc acggccgtca ctattcagca gtatatattc 120  
ttggttctgt ccaggatattt tcaggctttg ttatcgcgaa ccttgcagat cgcttttctc 180  
gttctctagg gctatcatag tctcataaaa cagaacaggc ccttattagt gcgtgcatca 240  
ggaatctcga aggtcggggt ggtaggcca atacttcaga taacctggat cgggagatgc 300  
cagaaattat tttccctttg cttctttaaa catagtggag gtgaattttg ccgtggtgaa 360  
tagtgaaagg cagcagatga agaagatcac atatgttata gcaacccttt gcaactgtaa 420  
attctc 426

<210> 1926

<211> 226

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-A4

<400> 1926

cgggtcgacc caagactcta gagagtgtcg tattatcagc tgggtggcacc actgcagctc 60  
 ctgtaatggg ttaccgtgta cattgcatag gttcatgtat atatatgcta ggtccttggt 120  
 acatgcctac aaggtacagt tccattctgt tcgagagatg tacttatgca cacgggtctc 180  
 tgtaacatcg atgcaataat ggccgggtga ctgtaagtgc acatac 226

<210> 1927  
 <211> 246  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-A7

<400> 1927

cctggaagga agacagctct tcgatgtcag tgtgggtgtc ggtcgtagtc tgcctgaaga 60  
 ccggtgatgg ttacacctag aagcatggga tgctcatcat cacactaaaa acctgtgctg 120  
 ttgtgttgct gtgtctatcc cagtaatagt tcagttggta ccttatgttc gaggtttggt 180  
 gtaagtagac tgataaatca caattgcagg acccagtctg ctcattaaag ctctgtggga 240  
 agaatg 246

<210> 1928  
 <211> 428  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-A8

<400> 1928

gcgcgggccg atacaagcct ctacattgac tcctactaac attacaggtc atagctaagc 60  
 aggtctgaca ggatgtcgtg gcagacatac gtcgatgagc acctcatgtg cgagatcgag 120  
 ggccaccacc tgacctcgc tgccatagtc ggccacgacg gcgcggtttg ggcccagagc 180  
 accgcattcc cacagttcaa gacagaggag atgaccaaca tcatgaagga cttcgacgag 240  
 cccgggttcc tggccccgac cggcctcttc ctcggtccca ccaagtacat ggtcatccaa 300  
 ggcgagcccg gcgctgtcat ccgcgggaag aagggatctg gaggcataac tgtgaagaag 360  
 acagggaag cgatggtggt cggcatctac gacgagccca tgacccccgg ccagtgaac 420  
 atggtggt 428

<210> 1929  
 <211> 418  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-048-Q1-E1-A9  
  
 <400> 1929

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cgctctgaa gcttacaaca gcaggttgag gcagacgctt gacgccaagc agctcaagac  120
tggaatgatg cacaagggga aggtgaacag ggtggacttc tcagggccgc tgctgtcgca  180
gccccggcgc atcgacgagc tcctgcacat ccacgagcag cagatccggc aagctggctc  240
ccggccatgg ttcattgaaag gcaccgagga ggaggagcac tgatggcaga gacacggcat  300
ggacacaact aaacgccccat cagatttgca cgtacttacc acagagcaag agaagatgct  360
ggaaacatat caaaggagtt ggaccgtgag ctagctctcc tgatgagcaa gtgttttt  418
  
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<210> 1930  
 <211> 447  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-048-Q1-E1-B10  
  
 <400> 1930

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acaagtacga gatagtggaa gtcgctgatg atttcactga ggagcgaggg ctgactgtca  120
tcccgttgct gaaggttgcc ggattcaaag ccgtcttcca cagacacgtg gatcccgagg  180
aggtgaggag gataccaaag gaagagctgt tccggttctc gcaccggggt ctttctcgtc  240
tcctgacggg cgaagagggc agcaatgccc cgaaaggctg ccatgagctg gactctgctg  300
ccactccagt ggaccttctc aagggtatca cggagcacia ggaagacgcg gtggcgacga  360
gtcctaaata ggagtgagcg actccgataa cagcgaagat aacgtanctg gatgtctgag  420
tgaccagatc cccacttggt taatgac                                     447
  
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<210> 1931

<211> 433  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
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 <400> 1931  
  
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 cggcgatcga tggctccgag cagctcatcg gcggcgacgt gcctgtgcct cgctctcgcc 120  
 gcggccacgc tggcgctggc ccacggggcg caaggaggag gaccatcggc atcggcgggc 180  
 gacctggaca aggtcacggc cgagaccttc ttggacatcg agatcgacgg caagcctgca 240  
 ggccggatcg tgctgggact gtttggggac accgttccta aaacagcaga gaacttccga 300  
 gcactttgca caggggagaa aggaattgcc aagtccggca agcctctgtg gtacaagggg 360  
 tcgacgttcc acaggatcat cccgggggttc atgatccang gaggcgactt caccaacggc 420  
 aacggcacgg ggg 433

<210> 1932  
 <211> 424  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-048-Q1-E1-B4  
  
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 ctggatagga ggatccatcc ttgcctccct gagcaccttc caacagatgt ggatctcaaa 120  
 ggctgagtat gacgagtcag gacctgggat tgttcacgag aagtgccttc aagctctggg 180  
 tcccccttcg gctccatttt atttattcct tgagtgtttt tcatataagc tactatgttt 240  
 gggattgcat gcctttgagc aggcaatggt gttgaattta tattttggga tttatatttt 300  
 gtggctcact acaatgcata cattgctcca gtccttttcc atgccaaatt tgttgctagt 360  
 ggtgaaaaca tcaaccacan aaaagagagg atggaaatta ataaagtacc taggatcata 420  
 ttat 424

<210> 1933

<211> 409  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-047-Q1-E1-G8  
  
 <400> 1933  
  
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 gaccgccaca tctattaggt gcagccatgg gtgcctgtgc aacgaagcct aagacgcttg 120  
 aggggaaagc cccagctgag gccaccatct ccacacccaa ggttgccact gagaccacta 180  
 ccatccacat tgagggttgcg gcaaaacatg cagtagttga gaaggtggag gaggacaagg 240  
 aggaggcact aacagtggcg gcgaaacaag agccagcagc caccattgag cctcagcaga 300  
 ttgctagtga ggtgaccact tcggaagtgg cggtcgtcgt tgtcgagcct gagaacaaag 360  
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<210> 1934  
 <211> 358  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-047-Q1-E1-H1  
  
 <400> 1934  
  
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 tgacgtggca cgctgtccg cgcaacggct cgcactgccg gatgaaatcc gggtgcaaga 120  
 accagctgcg gtggtcatta gagttggcag actggtgaag gccgaggctg aaagccgatg 180  
 acagggaaga tcaggacgac ggtgaccaag cggtttctgg agatcgcttg gatcatatct 240  
 atggaggact tctcgatcac ggaacgggaa gcctcgctgg cgcacgtgcc gtctcattgg 300  
 actgctaagc taaccgctga ctatgacgct gcagcttcag tcatgactct cttctagg 358

<210> 1935  
 <211> 408  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-047-Q1-E1-H10  
  
 <400> 1935

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ctcttcgcca agaaggagat gcggatcctc atggtcggcc tcgacgccgc cggtaaaacc 120  
accatcctct acaagctcaa gctcggcgag atcgtcacca ccatccccac catcggtttc 180  
aatgttgaaa ctgttgagta caagaacatt agcttcactg tctgggatgt cgggggtcag 240  
gacaagatca gacctctttg gaggcattac ttccagaaca ccaggggtct tatctttgtt 300  
gtggacagca atgaccgtga ccgtgttggt gaagccagag atgagctcca caggatgctg 360  
aacgaggatg agctacgtga tgctgtgctg cttgtttttg ccaacaag 408

<210> 1936  
<211> 418  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-H12

<400> 1936

ccctaaagcg agtcgtatga aggcccgacc tcctgccctt gtacaacgca cgcacggtcc 60  
ccgtcccaat ggcccagact ctgtccgccg cctcggagct ggccaccctg aagcgcccg 120  
tcggcaacga cgggttcggc gatggcagca acaacggcag cgcgaccggc gagaagccca 180  
agggcgggcg gggggaggcg gaccggcgcg cggcgatggc cggggcgcg cagcagttcg 240  
gcgagcacgg cggcgtgaac atgtccatcg aggcgtcggc gacgttcacg gtgatggagc 300  
cggacacgat gcggcggtcg ttgcggggcg agctggggcc cgaccgggga gacatgtaca 360  
tctacagccg gcaacttcaa ccgacgggtc tggcgctggg gcggcagatg gcggcgct 418

<210> 1937  
<211> 405  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-047-Q1-E1-H2

<400> 1937

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accggcgctg gtggcgggcg cgaacttaac agtggggaag gaggtgggtga ttctactgac 120  
gatggagggtg acctcaccgg caccggtggt ggcggtgatt taatcatcgg tggagggtgat 180

ggtggtgaag gagatttcac cggtggaggg ggttcaactca catatgctgg agatggaggt 240  
gattttacta gtggtggtga gctaaccgaa accggtggag gaggggaattt ggtangtggg 300  
ggagggcgagc taataggtgc tgggtgggggt ggagatttca ttgatggcgg tggatgaacta 360  
atcggtgatg gtggtggcgg tgggtggtgac ctcaccggta ctggt 405

<210> 1938  
<211> 364  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-H4

<400> 1938

gaatgtgaga acaatgtggt caccaatgcg ggctcaggtt gcaatgggtt tggagtgggt 60  
gtccttgggg accggcgata ggggtggtcc tccaagattc cccgaagtca atctaatacac 120  
gggcaactat gcgaaggact ggctggacgc taaagcgaca tggatatggca agccgacggg 180  
tgccggtctc gacgataaca gtageggctg ctggtacaag gacgtgaaca agcgcccctt 240  
caatagcatg ggcgcacgcg gcaacatccc catcttcaag gatggtctgg gttgtgggtc 300  
cagcttcgag atcaagtgcg ataagcctgt ggagtgtcc ggcaagcccc tgggtggtgca 360  
catc 364

<210> 1939  
<211> 403  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-047-Q1-E1-H6

<400> 1939

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gacgcgttcg ccaagcgcac cgcgcaggcg cgcaagcacg tcgcgaggtc ggccccgacc 180  
atccccccgc agcagacgca tgcgctcacg ttctgcgaca ccagggtacat gaacacgcag 240  
gacaccatcg gcgcggcgca acggggccatc acgttcaatg acaccggcac cgctaagatg 300



atgctgcagc tcgccgtcca ggacttcgac tcgtgcgacc gccccttcac acaggccggc 360  
gtcnccaacc ccatggggaa gtttgacaag gagctcacac aga 403

<210> 1940  
<211> 417  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-047-Q1-E1-H8  
  
<400> 1940

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ctacacccgc agcgcgctcc tcgaccccc agatacctcc ttctcgccta accatcgcca 180  
accaatttcg gggagaagtg tgggggaatc gggtcgccag ctctgatcgt gcgccaccgt 240  
aagctgtcca tctccgtgga gaattccctg cgtagcacat aattcgcgcg aggacacgtg 300  
tcattctgaaa agcaagttgg tacctggaat ctcaagtgcc aggagaagag caggtgggttc 360  
tggaggagcc acaaggcgag gagtatgatc tgatctaggt ggcgtttctc agatgac 417

<210> 1941  
<211> 437  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-047-Q1-E1-F12  
  
<400> 1941

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caatgatgac aggatgactg aaaatttccc catttggtgtg tgggttgaca tgtccaagaa 120  
tttatcgag ctagatttcc ttaaaacgat catcangggg gctgggtgcca atgttggggg 180  
tacagaaaac aatgaggaac tcctcctcct cctcgcttct gccctttcca aaaggttcct 240  
ccttgctctg gatgacttg agagcccag catatgggac aatctgctca aagattcatt 300  
gggagatggt gttgtcagag gaagaatact gatcacaact cggaacgagg aagtggcaac 360  
aagcatgaag gcaactatcc accatgttga caaaatggac cctgagagtg cctgngcatt 420  
attgtgcaat caagttg 437

<210> 1942  
 <211> 404  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-F8

<400> 1942

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 tgggtcgggtc ctcccaaagt cccccaggc aagaacatca cggccaccta tggcaaggac 180  
 tggctggacg ctaaagcgac atggatggc aagccgacgg gtgccgggtc cgatgacaac 240  
 ggtggcgggt gcgggtacaa ggacgtgaac aagccccct tcaatagcat gggcgcattc 300  
 ggcaacatcc ccatcttcaa ggatggctg ggttggtgggt cctgcttcga gatcaagtgc 360  
 gataagcctg tggagtgtc cggcaagccc gtggtggtgc acat 404

<210> 1943  
 <211> 434  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-G12

<400> 1943

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 caagtgagca agctatatat atatatagga gattcttcga gcgagctagt agcgagatgg 180  
 gttccgcggt cctcttttac tgcattcga tcgccgtcgt cgtcgcattg tcgtcgtcca 240  
 tggtcgcggt cggggcgcc gcccggggg aaacccccaa gttcatctcg gggctgtgcc 300  
 cggtcgcggt cgaccacag cgcgggatta gcgcggtggc cagcagctgc aaggaccgcc 360  
 cgctgccgtc gccggagcgc tgctgcgggg cgctcaaggc ctacgcgtgc ccctacagcg 420  
 agctcatcaa cgaa 434

<210> 1944  
 <211> 391

<212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-047-Q1-E1-G4  
  
 <400> 1944  
  
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 ccttcaaccg agccgcngcg caatgagcgt cggccagcgc gacggcgggc tgccgcccga 180  
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 tcacgacgaa ggccgctacg cgatgctgcg cgtggtcgct gcgccgtgct cgccgttttc 300  
 ggtgagccgc gaactgatgc gcgacgcggc cgtgctcgcg cgcgagtacg gcgtgtcgct 360  
 gcatacgcac ctggcggaac acgtcaacga c 391

<210> 1945  
 <211> 250  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-047-Q1-E1-E9  
  
 <400> 1945  
  
 tcctcaacgc tggcgccac ctccacctgc aaggacgcct gcaacgacct gccaagacc 60  
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 ctgatctca tcaccgaggc gtccggcacc atgtccgcat gcacgcctt gccaccctcc 180  
 aacgccgga cgcctctcta ctgcgcggcc gcgccttcg ggggctccgc cgatgcccc 240  
 gccggcgct 250

<210> 1946  
 <211> 386  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-047-Q1-E1-D5  
  
 <400> 1946  
  
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gtccatctag ctctcaagaa ccaacccgta ccagcgctat ccggccggcc atggcggcgg 120  
 cgcgccggct ctccctgccc ctcgctctgc tggctgctct ggccgtcgcc gggcgcgcg 180  
 tggcgagga ctacgacttc ttctacctcg tgctgcagtg gccggggggcc tactgcgaca 240  
 ccaagcatag ctgctgctac cccaagtccg gcaagccggc agtggacttc gggatccaca 300  
 gtctctggcc taaccgagac caccgcacgt tcccgagaa ctgcattccc gaccacgcat 360  
 tcaatccgtc tattgtgagc gatcta 386

<210> 1947  
 <211> 407  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-047-Q1-E1-E5

<400> 1947  
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 aagaatctag aaggaggagc aaccttccga gccaaaggcg cgaggcgat aagggtctgt 180  
 cgagggggca caagagcatg cggctgcagg acacgaacca gagccacgtg cacgccgagg 240  
 aatcgctgcc cgttgtggcc gaaaacgggg tgacaatggc ggggaacgac ggcgactcgc 300  
 ggctgttcgt cgacctggag cccgttccgg ccatcagcaa ggggcacggc ggcagcgtcg 360  
 gcggcgacca cgcgggcgcg tgcgccaggg ctaggacat gttcaac 407

<210> 1948  
 <211> 377  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-047-Q1-E1-B7

<400> 1948  
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 tcatcgacct cctcaaggcc gacggcgcca tctaccataa gacatgcttc aagtgcagcc 180  
 actgcaaagg ggtcctctcg atgtgcagct actcctccat ggacggtgtg ctgtactgca 240

agaccactt cgagcagctc ttcaaggaga ccgggagctt ctccaagaac ttcacgccag 300  
gtggcaagtc atcagacaag ggtgaactga caagggcccc aagcaagctg tcgtctgcat 360  
tttctggtac ccaggat 377

<210> 1949  
<211> 375  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-B9

<400> 1949

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ggcgtagtgt ccggcaacct ccgcgccgtt ggcggcgggcg agggccgatg acgccctgctg 180  
ccagcgccccg cgggggctcg tgcagggtccg ggagcgggac cagggccccg tgcgacggg 240  
gcaccagcac ctgcaccacc atcaccacca gctgcgggcg tggcgggcgt tcccaccccg 300  
ccgccccggg cggggcgcc gccctcctca gcgctgcgaa agcgacctca acatcagggg 360  
gcaccgctcc tgcag 375

<210> 1950  
<211> 362  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-C1

<400> 1950

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acttgattta gttatggacg gattggtacg cctcttgaaa gttcgctggg tccgggggtat 180  
caaccttgcc taccgcgacg caagaggcag cgatccgtat gtcgtcctac ggcttggtcaa 240  
gaataaactg aagacaagcg taaagaagag atccgtgaaa cccatatggc aagaggagct 300  
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ct 362

<210> 1951  
 <211> 99  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-047-Q1-E1-D10  
  
 <400> 1951  
  
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 cggagcttct tcgatttccc atccccgggtg ctgcataact 99

<210> 1952  
 <211> 368  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-047-Q1-E1-B6  
  
 <400> 1952  
  
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 catggcgc 368

<210> 1953  
 <211> 399  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-047-Q1-E1-A2  
  
 <400> 1953  
  
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ggcgcggag gagatggaga aggaccagga cctctgtac accgaccagt ggggccgacg 240  
 caactacgag tacgtctcgc tcggtgcga cgccctgcc gtcctcaagg gacgcacgcc 300  
 cgtcgagtgc tacaccgact tcatgcgcgc gttccgcgac cacttcgccg actacctcgg 360  
 caacaccatc gtggaaatcc aagtcggcat gggccccc 399

<210> 1954  
 <211> 373  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-047-Q1-E1-A3  
 <400> 1954

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 tcacctgggt gtcggcaaata gacctcaaga aagtgtcgct cttctcccg actcgcatct 180  
 acgcctgggc ttccatctcc ggattcgacc tccgcatccc tccccacagc acccaagcag 240  
 accacagcaa cggctgcaac ccctgctgga acgcctgggt acacttcccc atcccggtcg 300  
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 gcgatcgca cat 373

<210> 1955  
 <211> 373  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-047-Q1-E1-A5  
 <400> 1955

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 agtgggacgg ctgctacggc cccgcggact cgaggcacia cggctaccgc ttcggaagcg 180  
 gaggtgcgg gatgcggcac cacggtcgca ccccgagca ggaccggaag aagggcgtgc 240  
 cgtggacgga ggaggagcac aggtgttcc tcttaggcct gaagaaatac ggcaaggggg 300  
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acgcgcagaa gta

373

<210> 1956  
<211> 426  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-047-Q1-E1-A6  
  
<400> 1956

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gaggccgaga ccgacaagcc tgagatcgag ctcaagcccc ggatcgacct gcttgggcct 180  
gtagaggaga ccttcttcga catctacgac agatatgaac ccgtcaacaa cccggaggag 240  
gactgctgtt tcctcacaaa tagctatgac tccaccaccc attttgagac gacggtcaag 300  
gatgtgctcg ccttgtacaa caagatcact ggaaaggagc ttgatctctc agtcgatttg 360  
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cagctc 426

<210> 1957  
<211> 399  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-047-Q1-E1-A7  
  
<400> 1957

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gactacgact accttatcaa gctgctcctc attggagaca gcggtgttgg caagagttgc 180  
ctcctgttgc gggtctctga tggttccttc actacaagct ttattaccac aattggtatt 240  
gactttaaga tacgaccaat agaattggat ggcaaacgta taaagctaca gatttgggat 300  
acagcgggct aagaacgctt ccggactatt accaccgct actaccgacg agctatgggc 360  
atcttgctgg tttatgatgt caccatgaa tcctccttt 399

<210> 1958



<211> 443  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-047-Q1-E1-A9  
  
 <400> 1958

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ctcgcggggtc gatgcacgcc tctagccgca gtgccagcag agcctcgtcg tcgagctggc 60
gctgcagacg cacgcgctgc tgcgcgagct cggcaacccc gcgggcgcgc gcatcgctcct 120
cgaaaccgag cgccgcgcgg cactggagggc cgccccctca gccgcgcgcg cccgagacgg 180
aggacgcggg gcgtcgcggg ctaataataa gcgcggagtc cgcgcgcgcg cgccgcgcgt 240
gctggacgag ccgtcgtgga ccatgttctg caacggcaag aagaccgggt acgcggtgcg 300
aaggcaggcc acggacgacg acctcgctgt gatggagacg ctgcgggcgg tctccatggg 360
cgccggcgtg ctccccggga gggccgcccc ttcgtcggcg cccgacgcgg ctgcngcggc 420
ggcagcggac gacgaggtgc cct 443
  
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<210> 1959  
 <211> 430  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-047-Q1-E1-B10  
  
 <400> 1959

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ggtcgagaca agcctctaaa atgagtcgta gtaggtgctg gagtcggcgg acctgctcgc 60
gccgcggaag ctggacgcca aggaggagct ggagaagctg aacgaggccc cggcgtcgat 120
gacgtctctt gacttcatgg gctggcactt cgaccaggac gagctgatga agcgcaggga 180
ggacggcacg ctggacgccg acggcgatgc catgctcttc aagaaggcgc ccagcgtggc 240
gccaagaag ttctctacg tcgacagcct ctctccggc ggcatgagga gccctctgc 300
gcgccactga taataatata tgatcgctgt cgcgccactg aactaacagc agctcagtca 360
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tccattggga 430
  
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<210> 1960  
 <211> 438

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-047-Q1-E1-B11  
  
 <400> 1960  
  
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 aaggctagaa cttgttttatt tcatagaaaa ttcatatgaa ctccaaatca cttcatttca 120  
 gttcctaataa ttttgtaatt ttattctcta tcaacttagag tctctgggtt gtcatgaaaa 180  
 cagtaataaa atttatttat cacttaattc tatttaaaac acacgaaacc tttgaaaatt 240  
 cataacttaa aatctataac tccaaaaaatt atgattcatg ttcctaggat tctattttta 300  
 tatgtagatt attactgtgt attttgttta tatgtttcat gtgatgttca ttttgtctat 360  
 accatgtttg tctgtattgc tacgttttagc agtgaggaca cgtgtcatct gaagagcaag 420  
 ttggtacctg gaatctca 438

<210> 1961  
 <211> 355  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-047-Q1-E1-B3  
  
 <400> 1961  
  
 agagagtcgt attataagag cggcaggcag gtccgcgagg agggcacgca gaccgacgat 60  
 cgagccgtgc gggggctcgg gacgggaacg ggacaggacc caaaaatctc agatccttcc 120  
 tgcccgcgcc cccgtgcccg tcgacgcgtc gttcttgccg gccgcgcctc acctccgccc 180  
 gcgcctcctc caggggggatc ggatacgcca caggetgcgc gatggtgctg tgggtcttcg 240  
 gctacggctc cctcatctgg aaccccggtc tcgacttcga cgacagaatc ctcggcttca 300  
 tcaagggcta caagcgcacc tttagtctcg cttgcattga ccacagaggc acacc 355

<210> 1962  
 <211> 392  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-046-Q1-E1-G7  
  
 <400> 1962

acaagcctct acagtgcgtc tcatgatggt tactccgcgc gccttctctt tctctcccg 60  
acgtcgatcg tgttcttcag cacgggctag ctagctccct cctcccagc catggcgacg 120  
ccggacaaca aggggcacgg gcatccgctg cccaagtttg gggagtggga cgtgaagaat 180  
ccggccacgt ccgagggtt caccgtcata ttccagaagg cccgcgacga caagaagacc 240  
accaccggcc ctggggctgg gaacgcgcgc gcaggcattc cgccggcctt caggaacggc 300  
ggcggcgacg gcggttacag gcccgacttc ggcgacggca accagtacac gccgccccaa 360  
cggaagaagt gggccttctg tggctgctga at 392

<210> 1963  
<211> 236  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-046-Q1-E1-G8  
<400> 1963

aagataaagg taatggagtc gtcacgcagg ttccagccgg ccgtcctcct gcttctcctg 60  
ctcattgtgt ccaccgatat ggcacaggca agggaatgcg agaagtacag tgagcgattt 120  
gttggggcat gcatgatcgc agacaactgc gccaatgtgt gccgcggtga gggcttcttg 180  
gccggcaggt gcagcacctt ccgccgccgc tgcattctga ctaggcagtg ctaaac 236

<210> 1964  
<211> 374  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-046-Q1-E1-H10  
<400> 1964

acaacccact aaactgactc ttactagtaa aagctggagc ttttctgagc gtgtaggtgc 60  
gttgggtgaa cttggggccc cagtcccca cccaagatct cacctatctg cactgggctg 120  
gccggctggg ccgcgcgcca accaccgtgc ttccgccatt gcgtcgccgc ataaccttgg 180  
ctaagcgtga actttgtcac aacaaccacg tttggcgttt ccatgcttgt cctgggttcc 240  
tggcaatccc tgtattaatc cgtctgccat tgcattatct tgcactgact gatcttttcc 300  
aaccgaagga tgtggtggtc ggtagagcta aaagttaagt tggacccaaa aaaagaaaag 360

aaaaaaaaac aaaa

374

<210> 1965  
<211> 415  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-046-Q1-E1-H12  
  
<400> 1965

tgagtcgttt acctaagcag ctaccaacca accctataaa gctagacacc gtacccatgg 60  
ctcgcgctag cgtcgtcttt gtcattgctg ctctcctctt cgtcgccatg gtcgtagcac 120  
cgatggccga ggcaaagtct gccgatgccc ctgtggctga cgcgccggcc gatggacctt 180  
gcgggcccgc tgctgcacct ggccccagg gtgtcgaagg cctgtcaggc aatgaggatg 240  
acgatgatga ctccaccaac tgaggccaca catgtcggcc cggttaaatt tggaacaaga 300  
catggaagaa aaatgagagc aatgtcttta aaaccatgaa tccataataa tgtgtggtca 360  
tccatggata catccttgct ctccctcttt ttctttnggt ttgattttca atgtg 415

<210> 1966  
<211> 368  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-046-Q1-E1-H2  
  
<400> 1966

ctctatagaa agtcgtagta gatcccacga actacatgga ggacagcctg gtcgactggg 60  
ccaggccctt cttggcgcg cgcgtgtccg aagacaactt cgacgagctg ctcgaccgac 120  
ggctggagaa cagggtcgac cggctggagc tggagcggat gtgctcctct gccgcggcgg 180  
ccgtccgcca ctcagccaag cggcggccca agatgaaaca gatcgtccgt gctctggaag 240  
gggacgcgtc gctggacgac ctgaacgacg gggatgaagc agggcagagc atgatgttca 300  
gctccggatc ggagtacgac tccggggcca actacggggc caacatcagc aagttcagga 360  
aggtggcc 368

<210> 1967

<211> 383  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-046-Q1-E1-H3  
  
 <400> 1967

taagcctccc cgaccgccac atctattagg tgcagccatg ggtgcctgtg caacgaatcc 60  
 taagaccctt gaggggaaag cccagctga ggccaccatc tccacacca acgttgcacc 120  
 tcagaccact accatccaca ttgaggttgc ggcaaaacat gcagtacttg agaaggtgga 180  
 ggaggacaag gaggacgcac taacactggc ggcgaaacaa cagccagcag ccaccattga 240  
 gcctcagcag attgctantg aggtgaccac ttcggaagtg gcggtcgtcg ttgtcgagcc 300  
 tgagaacaca gaggacgacg acattgtgga gaagaccgtc atcgagaacg agaaccatc 360  
 agcagtccat gcataggaaa ata 383

<210> 1968  
 <211> 414  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-046-Q1-E1-H4  
  
 <400> 1968

gaaccccacc cacagcaaac gactggagat ctactaaacc tggaagcaga ggtgaatcct 60  
 tcggctcttg aactcgaaca aagcaatgca ttggcactcg ctattgtagc accaggtgac 120  
 tacaagccgc cagcatctca aagtatgttt gatgtcaatt cgtctgggtg ggagctggca 180  
 ctggtcaatg ctccaagcac ccatacaagc caagcagttg agaccaactt ggctggaggc 240  
 ttgacaagc tgctacttga cagcctctac gaagacgagg ccaggaggca gcagatcgcc 300  
 ggcgcgacct acaccggtag cctaggagca gccaacctt tctgcaccaa tgccagcgat 360  
 tcggttcaca tgtccagcag atttgacaaa ccggctaatt tgcagttggc actg 414

<210> 1969  
 <211> 382  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-046-Q1-E1-H6

<400> 1969

acaagactca agactgactc ggactagccg tgtggagcaa gaactcctgc accaagaagt 60  
acgactgcaa gataccttccc aactcgttgg tgatggactt cgtgaacaac ggggaggtgt 120  
ccggggtcac gctgctcaac tccaagttct tccacatgaa catgtaccgg tgcaaggaca 180  
tgctgatcaa ggacgtgacc gtgacggcgc ccggggacag cccaacacg gatggcatcc 240  
acatgggcga ctcatccggg atcaccatca ccaacaccgt cattggcgctc ggcgacgact 300  
gcatctccat cggccccggg acctccaagg tgaacatcac cggcgtgacc tgcggccttg 360  
gccacggcat cagcatcgga ag 382

<210> 1970

<211> 383

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-H7

<400> 1970

cacgcctcta cagtgagtcg ttttagagcc ataaagcgtg aagttggagt aattggtgct 60  
aggcaaaggc cagctgatag tgcagcaata tacacatcta cttctaattg cttattcaaa 120  
gtggtatcag caccaaaggc tagcccatat ttggaatgga agcccatatc agtaagcccc 180  
agcactgctg cacctcctgg tgctccatca cctgttgatg atggaagtaa aacagaagtg 240  
tctgctttgt ctaagaagct ttcacatgct aatgtatcac atgaacatgt cattataccg 300  
gatcacatca ggataccaga ttctgaaaga actcatttca tcttcggttc ttttgaatct 360  
gaaatttatc caaatgcttc ttt 383

<210> 1971

<211> 353

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-H9

<400> 1971

gtcgtattat ccgcgacgac atcaacgaac ttccgctcgg atgacgaaga cgtgcagcga 60  
catccacatg gcgacgacg ccgtcgccag cggagcggac gttcgccgag caggggcagc 120

accg'gc'atca cgtcatctac cagggagcag cagcagcagc acgacgacgc tggctgcggc 180  
ggcagctacc accacgacaa ggactacatc atcatgcaga cgcaggcgag gagcgggctg 240  
gcgtgccagc cgacgatctc cgtgatgggc aagggcggac agccgtgacg ctgcctgcgg 300  
gcgcatcgca acggtagaca ccacgtgctg agggagatcg ccctgccgtc gca 353

<210> 1972  
<211> 436  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-A10

<400> 1972

gggtcgagac acg'cgtctag aataactata tttaaaacag ttaagaattc atatataaga 60  
gtgcatatat atatataatc ctgccaagac aaaggtaatg gagtcgtcac gcatgttcca 120  
gccggccatc atcctgcttc tctgctcat tgtgaccacc gatgtggcgc aagcggcgag 180  
ggaatgcgag aaggacagcg agcgattcct tggggcatgc atggcgtcgg acaactgcgc 240  
caacgtgtgc cgcggtgagg gcttctccgg cggcaggtgc agcaccttcc gccgccgctg 300  
catctgca'ct aagccgtgct aaattaacct actcccggca gttcgatgg'gt ggacgtttat 360  
tctat'ttatt ggcttacttg at'ttttccc ccctaacaat aagaaaacgc acgtgctggc 420  
atgtacgttg tgtt'gt 436

<210> 1973  
<211> 379  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-G5

<400> 1973

ctcgcggg'tc gacacacgca tccacagtca cttggggcgag cgg'tgcggca cgcagcctgg 60  
aacaccttgg attt'gctgtt ccctatcggt cg'ttaccga ggcacgtgat cagcctgttc 120  
ttccggctgc t'gtatccgtg gtactggcct t'cctctt'gct ggaacttcgt gatgacctgt 180  
gccatgaccg t'gtactacta catcctgaac ctgctgg'tgt cgtgttggga gaacctgacg 240  
cggcccagtc accggagaac gcacggtgaa tgaagacgcg gcagcccatc cagtggcacc 300

ttgtgttggtt gttgttggttc atttttctttt cgtttgcgcg agtgggtgtac tagttagtag 360  
cagcggctta tgtgttcgt 379

<210> 1974  
<211> 427  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-047-Q1-E1-A11  
  
<400> 1974

ccactacact aactcgtact aaaggcctcg tgccttctct tctccctgg catggaggaa 60  
gtagctgttt cgcctatgat ggttgccgcc gtactgctgg acaacaatgg cgccgacgcg 120  
gtctcctgca ctgccatccc tagcgtaaca ataagcctag aggagaaaga aaatatcaat 180  
ggggatgttc ccacgatcac ctcagccgca agcaacgagg aggaggcgtt gttcagtgtc 240  
ggagaatcca tcaaggacga tggccatcgc ttgacgatgg aatgcaccac tcgcgtctcc 300  
tccagtagcc cttccactcg caagaagcgc ggggcgttca gcctcatcac ggcgatgttc 360  
ctgtccttcg gccggagcga cgacagcatg aagaagacag acgacgacat cacgatcccc 420  
aagaaga 427

<210> 1975  
<211> 394  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-046-Q1-E1-F1  
  
<400> 1975

cgggccgacc cacgcgtcta ccagactcc tgctcgacgg ggcagctgca cgtggccgtg 60  
ttcaagccgg cggacgacga gcccatggcc gccacaacc cgcgcggcct ccccggtgtc 120  
tccaccggcg aaggcctgaa gaaagggacg cgcgtcgggg agggggcgct gagggaggtc 180  
gcggcctaca tctcgaacca cccaccaggg agcgggaccg cggatgatgg gttcgcgggt 240  
gtgccgccga ccgcgtcgt ccggtgcacg cacggagcct tcaggcacgg cggagccgga 300  
tccggagccg gagcgagggc gccggtgccc aagctggggg ccatgcaggc cttcgttagt 360  
aactgcggca gctgcgagga catgggaccc agcg 394



<210> 1976  
 <211> 433  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-F10

<400> 1976

acaagccact agactcactc gtcttagccc tgcggaccgt agagctcctg gagcaagccg 60  
 ggttcggccc cgtgaagcag gaccacagcc gcgggctcga ccacggcgcc tgggtgccgc 120  
 tgatgctcat gtaccgggac gccagcatcc ccgtgtgcc a gctctcggtg cagaccgacc 180  
 gcgacggcac gtaccactac aacctcggca aggcgctggc gcccctgcgg gaggaaggca 240  
 tcctcatcct cggctccggc agcgccacgc acaacctgcg caagattagc ccgtccgacg 300  
 cgcccgctgcc gcagtgggccc gccgagttcg acacctggct caaggactcg ctccctcaacg 360  
 gaaggtacga ggacgtgaag cgttacgagg agaaggcgcc gcacgcgagg gtggcgcacc 420  
 cgtggccgga cca 433

<210> 1977  
 <211> 442  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-F11

<400> 1977

tcgtcggctc acacacgcca ctaaaatgat ccgtccacc tccattgacc aacaattaag 60  
 cctccccgac cgccacatct attaggtgca gccatgggtg cctgtgcaac gaagcctaag 120  
 acgcttgagg ggaaagcccc agctgaggcc accatctcca caccaagggt tgcacctgag 180  
 accactacca tccacattga ggttgccgca aaacatgcag tagttgagaa ggtggaggag 240  
 gacaaggagg aggcactaac agtggcgggc aaacaagagc cagcagccac cattgagcct 300  
 cagcagattg ctagtgaggt gaccacttcg gaagtggcgg tcgtcgttgt cgagcctgag 360  
 aacaaagagg aggaaggagt tgtggagaag accgtcatcg agaaggagaa gccatcagca 420  
 gtccatgcag aggaaaaata tg 442

<210> 1978  
 <211> 249  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-046-Q1-E1-F4  
  
 <400> 1978  
  
 cgggccgacc acgcgtccag ccacgcgtcc gcccgacgcg acgattcctc tctccgccc 60  
 gttcccaccg atctcacgct ctctctcttc ctccgtcgcg tcggcgtcgc catcgccggc 120  
 catggggttg ggtggctcca aggaggccgt ggccaccggc aacaccagcg ccggcaccaa 180  
 ggtcatccgg aggaagtcct cctcggcttc aaccggcgca ggcaacacct caacaacgtc 240  
 gccgtcgtc 249

<210> 1979  
 <211> 414  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-046-Q1-E1-F5  
  
 <400> 1979  
  
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 accagtagat cctgcaaaag cctagcagta gagcttcttg taccctaatt ttcagccacc 120  
 acgacgggtt taggtccaat ttgtgaaggt ctcaagaatt cccggatgta tggttttctg 180  
 aaagccaatg gcccaaggaa acgttgccac tttatttctc tcgacggagc tttcacgtga 240  
 tcatacggct tttgggtagt catctgattg tcttcgtcga acttgttgta cccagaggtc 300  
 tgagccctag accctcgatt cattagagaa cccgtgatct ggtcattgtc caagctactt 360  
 tgttctgatt gcaggaaatc tttaggtgcc aaaagcaact gtacattttt tttt 414

<210> 1980  
 <211> 412  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-046-Q1-E1-F6  
  
 <400> 1980  
  
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ctgttctctga acatcagcaa gccgttcac acgttccggt cggaccccaa gaagcccgcc 120  
gtcgtggtct ggaacgacac tgcggccacg aacggcaagg acggcaagcc ggtgggcacg 180  
gtggggagcg ccacgctggc ggtggagtcg gactacttca cggcgtagcg cgtggtgttc 240  
cggaacgacg cgccgctggc caagcccggc gccaaagggcg gccaggcggg ggcggtgcgg 300  
ctgttcggga ccaagacgca gatctacaac tgcaccatcg acggcggaca ggacacgctg 360  
tacgaccaca agggcctgca ctacttcaag ggctgcctca tccggggcag cg 412

<210> 1981  
<211> 201  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-F8

<400> 1981

ctcgcggggcc gatacacgca tctaggatga gtacgtacac ctgcaccatc aaagacgagc 60  
ggtcagtccc aggtccgggt agacgcccc aacagcagca cttacaatgg atgggatgtg 120  
cccgggacaa gctccagtca aagttcaacg aaaccccaac aaacccaaac caaccctcca 180  
atcctgaatc cacaaggagc a 201

<210> 1982  
<211> 386  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-046-Q1-E1-F9

<400> 1982

gcaagcgatc gtcggagcag agagagactt cctcgctctc atcccatccc gccgcccgcg 60  
tctctacggt cgctaataag ccgccgcac cagggatgga gatgaagaag atcgcttgcg 120  
ccgtcctcgt cgccgctcgt gccaccgtgg cgtgggccgc ggaggcgccg gctccgtccc 180  
ccaccagcgg ctctctcgtg gtcgcacccg ccatcgctgg ggccgcccgtg gcctccttct 240  
tcgcgtacta cattcactga gccgccggac gaggagccgg actgccggag ggaagagaac 300  
aaggggggga gagacttggc tgcgctgcgc tgctctgctg ctncgcgca tccccgatgc 360

gtgggtgggt gtgctctgat tgggca 386

<210> 1983  
<211> 393  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-G1

<400> 1983

gggtcgaccc aagcctctac acagactcct gataggcaac acggacgcgg cggaactctt 60  
ggcggagcac ggcgtgcagt cggcgcgcgc catcagcccc ggcgggcgcg gcggggcgcg 120  
caacaagcag gcgcgcgagc tgaagcagca ggtgagcgac atcaagcacg aggtgcactc 180  
gcagctggag cagacgcggc agacgcgcgt gcgcatgcag ggcatcgcca agcgcatcaa 240  
caagctgcac gaggaagggc tcaacaacgc catcaactcc acgacgggtg tggccgtgct 300  
gatcgccacg gtggcggttcg cggccatctt cacggtgccc ggggagtagc tgcaggaccc 360  
gggcagcctg gcgcccgggc acgatctggg cga 393

<210> 1984  
<211> 422  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-046-Q1-E1-G10

<400> 1984

atctgagtac gtactaatcc ttacagatac agagcagctg tactgatgga cgagggcaag 60  
gaggaggagg cgatcgcgga gctgtcagga gccatagctt tcaagccgga cctccagctg 120  
ctccacctcc gcgcggcgtt cttcgactcc atgggcgagc gcgagagcgc cctgcgggac 180  
tgcgaggccg cgctctgcct ggacccgacc cacgccgaca cattggagct gtacagcaaa 240  
gcctccacca ccaaggccga accccagagc taggcagcca gccggccggc aggccgccgc 300  
tctcctcgtc gtcgattcag ctgcggtttt tgcgaggcan gatgatgaga cgatctcttc 360  
tctactctca tgggggtgga gctgcagatc agtgaggcan gagcaccgga acatgcacat 420  
at 422

<210> 1985  
 <211> 444  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-G11

<400> 1985

tcgccggtcg acacacgcct ccaaaccaac tccatccatg cgcctctcgc tctcgctggt 60  
 ggtgctcctc ctctccacc tgctcccggg gcgggcggcc tccttttcca cctcctgctg 120  
 gtgccagggc cgggagggcg tcgcggaggt ggcgcgcgatg gggctcgccg gggacgggtc 180  
 ggcggacacc gccacactca gtaataatga aaatgggcgg ttcatttatg gagttgcgag 240  
 ttctcctggt aaaagagcat cgatggagga cttctatgag gcaagaatag acgacgttga 300  
 tggagagaaa attggaatgt tcggtgtata tgatggatcat ggaggagtcc gagcagctga 360  
 gtatgttaag cagcaccttt tcagcaatth aatcaaacac ccaaagttca tcttgatac 420  
 caaggctgct atcgccgaaa ctta 444

<210> 1986  
 <211> 403  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-G2

<400> 1986

gggccgaccc acgctcttac ccacacgtcc gctaacgcgt ccggtccggg gacgacatth 60  
 ggccgcatca accacacagc acaggcacag cgcagcacca tgacgatgga gggggcggth 120  
 tccgacaaca ccaagggcct ggcgctcgcc gtcgctcca gcgccttcat cggcgccagc 180  
 ttcactctca agaagatcgg cctcctgcga gcagccaagt gcggcgaccg cgcacgtggc 240  
 ggaggacaca cttacctctc cgagcctcta tgggtgggcgg gaatgaccac aatgctgctt 300  
 gatgaggtcg caaacttcat tgcttacata tttgcgccgg ctgtactcgt gactccactt 360  
 ggggcgttaa gcataatcgt aagttcagtg ttggcgact ttg 403

<210> 1987  
 <211> 374  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-D2

<400> 1987

tgcgagagatc cgccgattcc gatgcatctg cgtatttcga caaggaagag cagaaatccg 60  
gcgattctga cgccgccacg tctgttgaga agcagaagaa gcagaagaag gagaaatccg 120  
gtgattatctt cgacaaggaa aaggaggaga accccgagga ggacgctgcg cccgtcgacg 180  
tctccgcgga cggcgtgtat gtgcctccca aggaggagaa atccggcgaa gacgccacgc 240  
cggtcgacgt ctccaccacc accggcaa atcgatatctt ttcttccaag gcaaaccgca 300  
agcccacggg aggtcagccc gcagagagct ccaccaccgc caccgccacc gcggatgcgt 360  
acgcgtctca aagc 374

<210> 1988

<211> 394

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-D6

<400> 1988

ctcgcggggtc gacacacgca tctaaagcga ttctgaacag ctccgctagc taaagcaggg 60  
caaggcggcc ggaaggcagg aaatccgtac gcacgccgag gtcgaggtcg aggtctcagc 120  
agggaggatg gaaacggagc agcagggcgt ggttgccggg gtgaagccga cgctggccaa 180  
ggggacgccg tcggcgctgt tccggctccg caacgggagc ctaaaccgcg tgcgcctccg 240  
ccgcgtgttc gacctgttcg accgcaacgg ggacggcgag atcacggtgg acgagctggc 300  
gcaggcgctg gacgcgctgg gcctcgacgc ggaccgcggc gggctggccg ccaccgttgg 360  
cacctacgtg cccgacggcg ccgcgggcct ccgc 394

<210> 1989

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-D7

<400> 1989

acaagcctct attctgagtc gtgtcacgga gccagggag cggaggcggg cgggccggcg 60

ggcggccatg gacgtggact gcgtctcgct gcccgcgcgc cggcgggcg acgtggatgg 120  
 cggcgccgc cggccgtggc ccaaggccgt gaccaacggc ggcgtccacg agctgctgga 180  
 gtgccccgtg tgcaccaact ccatgttccc gccgatccac cagtgccccca atggacacac 240  
 gctgtgttcc acatgcaagg ccagagtaca caaccgttgc cctacctgca ggcaagagct 300  
 gggcgacatc aggtgcctgg cgctggagaa agtcgccgag tcgctggagc tccccctgcag 360  
 gtactactcg ctgggggtgcc ccgagatcat gccttactac agcaagata 409

<210> 1990

<211> 400

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-D8

<400> 1990

acaagcctca agtatgagtc ttataaata aacagggttc catggtctct ctcaactcaa 60  
 gaacagtgat ttgaaataat tgggaataaa tagttcgtga atccctgaag cgtgcatata 120  
 tatattcctg ccaagataaa ggtaatggag tcgtcacgca ggttccagcc ggccgtcatc 180  
 ctgctttctc tgctcattgt gtccaccgat atggcacagg caagggaatg cgagaagtac 240  
 agtgagcgat ttgttggggc atgcatgac gcagacaact gcgccaatgt gtgccgcggt 300  
 gagggcttct tggccggcag gtgcagcacc ttccgccgcc gctgcatctg cactaggcag 360  
 tgctaaacaa gatcgctcga tcgcttgcca tgcacgcaca 400

<210> 1991

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-D9

<400> 1991

gattcgccac agctcgttat cctcctcttg cattgcattg caggtcgtag ttgagcagca 60  
 gcaaccactg cacaggatgt cgtggcagac gtacgtcgat gagcacctca tgtgcgagat 120  
 cgagggccac cacctgagct ctgccgccat agtcggccac gacggcgccg tttgggcccc 180  
 gagcaccgca ttcccacagt tcaagccaga ggagatgacc aacatcatta aggacttcga 240

cgagcctggg tttctggccc cgatcggcct cttecttggc cccaccaagt acatggtcac 300  
ccaaggcgag cccggcgctg tcatccgcgg gaagaaggga tctggaggca taactgtgaa 360  
gaagaccgga caggcgctgg tgatcggcat ctacgacgag cccatgaccc ct 412

<210> 1992  
<211> 404  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-E1

<400> 1992

aagactctac acagagtgcg actatctctc ctccccctt caggctcccc gatccgacga 60  
ccccagcggc ggcgatgggc ggcaaggacc tgacagagga gcagatcgcc tcgatgcggg 120  
aggccttcac gctgttcgac acggacgggg acggccgcat cgctcccacg gagctgggag 180  
tcctcatgag ctccctcggc gggaacccaa cccaggcgca gctccgggac atcgccgcgc 240  
aggagaagct cacggcgccc ttcgacttcg cacgcttcct cggcctcatg cgcgcccacc 300  
tcaggcccga tcccttcgac cgcccgtcc ggcagcctt ccggtctctc gacaaggacg 360  
gctccggcac cgtcgccgtc gccgacctcc gccacgtcct cagc 404

<210> 1993  
<211> 302  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-E2

<400> 1993

acgcgtctac ggagactcgc gcgatgacgg ggctgtacga catgctcaag actacgtggg 60  
cccgaggagaa cggcagcgtc ggcacggagc agcgcaagat cctggtcggc cccatccccg 120  
gcggcgctcag cccgtccgtc agcgacgggg acgacctcgc cacggtcagg atgcaggccg 180  
acggcatcct ctccctcggc gagaacccga actacgcca cctccgggac atcacgcgcg 240  
aggagacgct cagagagcgc ttcgacatcc cacgcgtccc ggctcatgc acgtccacct 300  
ca 302



<210> 1994  
 <211> 421  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-046-Q1-E1-E8  
  
 <400> 1994  
  
 acacacgcgt ctaccacac gtctgcccac gcgtccgaac caaccctaga aagctagaca 60  
 ccgtacccat ggctcgcgct agcgtcgtct ttgtcattgc cgctctcctc ttcgtcgcca 120  
 tggctcgtagc accgatggcc gagggcaaagt ccgccgatgc ccctgtggct gacgcgccag 180  
 ccgatggacc tagcggggccg gctgctgcac ctggccccc ggtgtcgaa ggccgtgcag 240  
 gcaatgagga tgacgatgat gactccacca attgaggcca cacacgtcgg cccgggtaaa 300  
 tttggaacaa gacatggaag aaaaatgaga gcaatgtctt taaaaccatg ataatgtgtg 360  
 gtcattccact catccatgga tacatccttg ctctccctct ttttccttcc ggtttgaatt 420  
 t 421

<210> 1995  
 <211> 408  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-046-Q1-E1-D10  
  
 <400> 1995  
  
 tctggtcgaa aatttcgagg ctaaggctgc ggatttcgga cttgccaagc tgaccacaga 60  
 caccaacacg cacgtctcca cgcgtgtcat gggaactttc gggtatttgg ccccgagta 120  
 cgcgtcgagc ggcaagctca ccgacaagtc ggacgtgttc tccttcggcg tcatgtcct 180  
 ggagctcatc accggcagga gaccggttga tcccacgaac tacatggagg acagcctggt 240  
 cgactgggcc agaccctct tggcgcgcgc gctgtccgaa gacaacttcg acgagctgct 300  
 cgacccgcgg ctggagaaca gggtcgaccg gctggagctg gagcggatgt gtcctctgc 360  
 cgcggcggcc gtccgcact cagccaagcg gcggcccaag atgaaaca 408

<210> 1996  
 <211> 385  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-B4

<400> 1996

tgggatccct cgctaataac atcatggctg tgggcgccgt ccttgccggcg ctcgctgccg 60  
gcgggtcgctg cgggcccccg aagggtgccac ccggcccca catcaccacc aactacaacg 120  
gcaagtggct caccgctagg gccacctggt acggtcagcc caacgggtgcc ggcgctcctg 180  
acaacggcgg tgcgtgcggg atcaagaacg tgaacctgcc accctacagc ggcatgacgg 240  
cgtgcggcaa cgtccccatc ttcaaggacg gcaagggtcg cggctcatgc tacgaagtga 300  
gatgcaagga aaaacctgag tgctcgggca atccagtcac ggtgtacatc actgacatga 360  
actacgagcc tatcgctccc taaca 385

<210> 1997

<211> 133

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-B6

<400> 1997

tacaacactc tatagtgaag tcgtattaac gcgtccggtt ttctgccggt ctgtcggcag 60  
ccgctttctc ctattcatca agactgtaat gtctattgtt gctacctaat gcttctcact 120  
tgtcattttg gac 133

<210> 1998

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-B7

<400> 1998

tcgcgggccg atacacgcct ctatacgtcg tcgtagcacc tcgtggacgg tatgcgcccg 60  
ctccgcctcc gcgggcagct ggagtactac ccgccgccac cgcgcgccacc gccgctgggc 120  
cacgccgatg tgtaccatga cgtgatcctc ccgccgccgt cgcaggcacg gttcggcttc 180  
gagatcaagg aggtgggcat gaccagccgc tacgcgtccg ctgaggatct gcaccagatg 240  
gacagcgacc aggaagaggg tgctgagggt ggcgatgacg gtgacagcag ttgccacac 300

gccatcgaca tgcaggcgga ggagttcatc accaagttct atgagcagtt caagtcagaa 360  
tcgttcaacg gccgtgcctc cgagtgat 388

<210> 1999  
<211> 415  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-046-Q1-E1-B8

<400> 1999

acaacactct atagtgatgt cgtattataa gtgcatgaat ccaaattata ccgagtttaa 60  
attcccgcaa atcaaagctc acccatggca taagatattc cataaaagga tgccctgctga 120  
agcggtagat ctctgtgtcca ggcttctgca gtactcacca aaacttcggt cgactgcttt 180  
ggaagcattg gtccatccgt tctttgatga acttcgggat ccaaacaccc gcttaccgaa 240  
tggtcgtttt cttccgcctc tcttcaattt taagcccat gagctgaaga acgtgccggc 300  
ggatttcattg gtgaaattgg tcnctgagca tgcacggaag caatgtgcct tcgtaggggtg 360  
gtgatctctg gataagagga tgacgactcg atgattagct gaggaccaag ttaat 415

<210> 2000  
<211> 439  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-B9

<400> 2000

atacaacca ctagaatgag tcgaacaacg gccgcgctct tgggtgctagc cctcgcgcta 60  
gtggcggcca ccgccccaca ggtagcggag gcaaagaaga agagagcggc ggagagcggc 120  
gaggcggcgg aggcgaagaa gatccaggac gacttctgct cgacgctgtg cgagggcaag 180  
aaggggacgg acctggctgt gtgcaaggag tcctgcgcgc tctcccagca gtccaacctg 240  
gtgctgtacg gcaggatcca gtgcaagggc aagtgcaccg agcagaaggg catcacggcg 300  
ccggccatga aggtctgcca ggaggagtgc gacaaggcgt acgtggtgaa ggcgcccgag 360  
gtcaccaagg cctgcagcgt cacctgcgcc aaggagaaga acccgcgctt cagcgagaac 420

tgcaagaggt cctgcaccc

439

<210> 2001

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-C1

<400> 2001

gggtcggacc acgcgtctac taactatcag tgcattgtgt catccgtgca cgccggcaat 60

gggtgtcctcc gcccggtgcgc tcatcggcct cctcgtcgcc gcggcctccc tcgccgtcgc 120

gctctcggat ggcgggcgga tggcgggcgcc ggtgtacggg tacgcggcgg ggagccccc 180

cgggccggag aactggggga agctgagccc cgcgtagaac ctgtgcgggg aggggaagca 240

gcagtcgccg atcgacatcg tcaccaagca ggccgtcccc gccgccaccc tcgacaccct 300

caaccgcacc tacggcgcca ccaacgccac gtcattcaac gacggccacg acattacgct 360

ggcgctccaa ggcaatgttg ggaccgtga 389

<210> 2002

<211> 113

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-046-Q1-E1-C10

<400> 2002

tgagtcgtat taaaccggna cggatgcttc tacgtgccgg ttcacctctc togtttgata 60

ggcgcttcgg ctcgggactg gcgcttgtga ccgagtgatc tgggatggca ttt 113

<210> 2003

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-C11

<400> 2003

tacaactcac tagagtgagt cgtagtagat ccattctgct aataagcctg cgtgcccttc 60

gttcttcctc gtctcgatcc cgacgacgct ccgttcggct ccggcaaacc acattcaagtc 120

gcgatggaga tgaagaaggt cgctgcgcc gtctcgccg ccgccgcctc cgccaccgtg 180  
gtcctcgccg ccgaggcccc ggcgcccgcc cccaccagcg cctcctcggc cgcgttcccc 240  
gccgtcgggc cgtgctggg cgctccgtg ctctccttct tcgcctacta cctgcagtaa 300  
aattaaagga ggatcgagg gagaggctgc tggctgccat tgcctgtatt cggttggatt 360  
ccgtttatat atatatttaa gtactttaat ttgggtctga acatgtcgat tgatccattc 420  
attttatttg 430

<210> 2004  
<211> 414  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-C2

<400> 2004

gtgggtcgac ccaagcctct acacagactc gtgctaacgc gtccgggcaa ggatgtcgga 60  
cgcgaagcta ggaccaggct gccggagtcg ccctgatcta gcttctcagg aactccgaat 120  
gccctggatc ctagccaatc atcctccttc ccctttgaat ggttgctagc ttctcaagaa 180  
ctccgaatgc tctggatcct agccaatcgt cctccttccc ctttgaatgg ttgctagctt 240  
ctaaggaact tcccattaat aaattgatga ttattttgtc attggtgata agtcacagga 300  
aactaaccaa aacagaaaca actgattttc ccctaatttt gtgtttcatg cacagttttt 360  
taaatctacg gtggatgttt cctggtaaaa gtattgtgtt ccttgacaat aatg 414

<210> 2005  
<211> 391  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-C5

<400> 2005

acaagcctct agtgtgagtc gtactcatcg cgtcgggtccc gcgatgggcc tgttctcatc 60  
ggccgctaag agatgtagaa agtgcaagaa gttcctccgc agcgcgggcg cgtgctgctg 120  
ctcgccgtcg gcctcctccg ccctgctgg tgggtgtgcgc ggcaacgaag aggcgtcgac 180  
gtcggcgctg gcttccgcgc cagatggcaa gaaaaagaag aggtggagga agagaaagtt 240

ctggagaaag aagaagaagg ccaagaagga gagcgacgat ggcagcggcg agctcgtgga 300  
tctcgtcaac agcttctcgg ccaagtccga cgtgtgcaag aacgtgaatg cggccgagga 360  
gattctacgg ggctgcaacc agaacatgcc c 391

<210> 2006  
<211> 381  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-046-Q1-E1-C6  
<400> 2006

tacaagcctc tagactgagt ctctcgtagac aataatggcg cctctcctgg cgtcgatgct 60  
gctcgtcggg ctcgccgtgg gctccgagga ggaggaggac ggcggcggca aaaagaagcc 120  
ccacgtcaac cacggcaagt ttaaggcgga gccgtggacg gacgggcacg cgacgtacta 180  
cggcgggcgc gacgggttaa ctgacaccac ggacggcggc gcgtagcggt acaagggcga 240  
gctggggaaa gactacggca ccctgacggc ggccgtgggc ccgtcgtgtg acaccaacgg 300  
caccgggtgc ggcggtgct atgagctcaa gggccccaag ggcaccgtgg tggtgacggc 360  
caccaacgag gccccgccgc c 381

<210> 2007  
<211> 394  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-046-Q1-E1-C7  
<400> 2007

tacacgcctc aacacagatt cggaaaaact gtttcaaac tgtgacataa tgatttaggg 60  
agatagctca caccttttac accatgccaa cctttaacag tactttgcat atacattttt 120  
taatttgcca acccgacgct aattaaatct gtccacaaca atgtgacctg ggacgacatt 180  
agatcgagca acaaggtaaa ttgatctagt ttactcggga cagactaat tcacgacct 240  
cgcaaccact tgtacgggta ttatgtatgg aagaagagcg tgaataaaac actgacgagg 300  
atcagctcga gtgcttact gaacaagcca ctacttgagc ccagtgcctg agccttgtct 360  
tcacaagcag agggttatct cctgggttgc aaat 394

<210> 2008  
 <211> 374  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-046-Q1-E1-C8  
  
 <400> 2008

atacacgcct caacaccgag ccatgacaat gacaatagcc gccgtgctct gcctgctcct 60  
 cttctctggc cgtctcgccg cggcggagaa gactttccgc ggaggcggag gcgagggcta 120  
 cggcgggttg gaggccggtg gcgaggcggc cggcggcggc tactccaccc cgagcgaggc 180  
 agcgccatcc acgcctgccg ctggggagac gacgaccct tcgtcaggcg gcggttactc 240  
 cacccttagc gaggcagcgc catccacgcc tgccgctgag gagacgacga cgactccttc 300  
 gtcaggcggc gggggttacg gcggtgcaac cggcaaggct tcctcaagcg gcggcgggct 360  
 ggaccccgac ggcg 374

<210> 2009  
 <211> 398  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-046-Q1-E1-C9  
  
 <400> 2009

ggccgacaca cgccaccaa gaaaggcgcc tgagaacaag acggatgctg ctaattgacg 60  
 tttcagctcg tttgtttgtt cgtcccttcg gtttggcact gatgcttatg acccattggt 120  
 ctgccattgc aattgaaatg tggttggaac gtgcttgatc gggaactaac atgaaatgag 180  
 tgaagggtag atgctgatct gaaaaaatatg tgtgttcccc cctctttcct tccatgtcgt 240  
 gttgttgtag gtaaccgtca caatatatat aggtggcccc ctttggaatc cggggattat 300  
 tccgtttgct gtattttttt ctgtgaaaat gaactgattc ctgtcaattt tctatatgat 360  
 ttatgattca tctgaaattc ctgagaccga tgttgaat 398

<210> 2010  
 <211> 282  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-B3

<400> 2010

ctctccgcgc cggcggagac tgcgaaggcc aaccactccc agccgccgaa taactcgggtg 60  
gaagagcgac ggattcagat tgctcgtttt aatgccctga agcagcggca gctcctcaag 120  
caccggcggg atcgggagct cgccgtcgcc acggcgggcg cgtggggcac cagtgttgct 180  
gggtctcatc gtgccgtgc cgccgccgcc ggcggttacg gtgcgccggc gccggcgccc 240  
gcgccacgtg tcttgagctc gtacgcgtgg cccccgtac ag 282

<210> 2011

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-D1

<400> 2011

caagcctcta tatagagtct tattatTTTT tttggagcaa gcaagcagat aaaataatga 60  
aatactcgtc acatatgcc a tggtggcat atcaagcggc gcaggtgaaa caaagtcttt 120  
gtggtagcat acagcatgct acgcacgaag gtactactac ataccgcata acttgagcga 180  
atacaacaag caaacatag gcaagccccg gaatgaaagg aaacaagggt acaaatgtgg 240  
cggcccaaac cacccttact cgtcttggtt ggctctctcg tctcatatt ccgcctcttc 300  
atcagcagtg gcatcctggt actgctggta ctcgacacc agatcgttca tgttgctctc 360  
agcttcgggt aactccatct catccatgcc ctacagcagtg tatcaatgca agaaaacctt 420  
tc 422

<210> 2012

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-H7

<400> 2012

cgcgggctga cacacgcgtc aagccgcaact ccctctacgc ctcaaggctc tcctctcgga 60  
ggtctgatag gcaaccaat aatggcagaa gtcctatcag gatctcatga acaccgtcta 120



agctctgcct tagatggaca ctacgacgag aagaggaaat ccaatgtgga atacacagag 180  
gacgagaaga aagccgtgat cgcggtctg aaaaagaagg ctttgagcgc ctacacagaag 240  
tttaggcatt ccatgaagag ggggaggaag agcagcaagg tgatgtccat ctogattctg 300  
gatgagcgtg aacctgagga ggtgcaggct gtggatgcct tccgccagct tcttgtactt 360  
gaagagctgc taccatcgca gcatgatgac gtacacatga tgcaaagatt tctcaaggca 420  
agaaagtttg at 432

<210> 2013  
<211> 294  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-045-Q1-E1-H9  
<400> 2013

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gaatccttcg gatctggtac tcgaataatg cagtgcattg ggactcgatg ttgtagcagc 120  
agttgaccac aagccgcgag catctcacag tatgtttgat gtcaattcgt cagggtggga 180  
gctggcactg ggcactgctc caagcactca aattatccag gcagttgaga caagattggc 240  
tggaggcttt gacgagctgc taattaacag gatctacaaa gactaggcca gtag 294

<210> 2014  
<211> 431  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-046-Q1-E1-A10  
<400> 2014

tacaacactc tagagtgagt catgctaatac acatggttgg gaagctggca ttagtctccc 60  
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ttactattcg aaaagaagca aaaggcaaaa gctatcgata taatagttag tgaatgcagt 180  
taatagggat aagggctatg acggtattgt gctcgagtcc tgggtcaagat gggctattta 240  
tggtgtgctg gatgaccaag agctacgtta catggcactt gaatttgta agcagctggg 300  
agaggttttg cattcagtca attccaaaat caagtagcca ccatttgga ttaatttatg 360

ttattccagc tccaagaatg caaaagctca ataataagga ctttggaccc aaagatctca 420  
 tgcattctggc t 431

<210> 2015  
 <211> 439  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A11

<400> 2015

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 aggtactact gccagaagaa gacggcgagg gtcgatagga tcgtgggtga tgccatcgac 180  
 gccgatgaca ccgtcaggat cagagcgacg gcgcgacagc tgagcaatag gagcgaaatc 240  
 acggcaaaca aggcacagga ctccaacgag gtctctcaac ctaaaggggg gaccaaattg 300  
 cttaggttca gtggcttgct gatcgctgct gccgcttggc acaagcaciaa cttgttcagc 360  
 cgccaaagaa gcaagccttc gccgcctcct gctgccgctt cagatgcaag ctcccaaacc 420  
 tgattaggca gcgctatat 439

<210> 2016  
 <211> 241  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A2

<400> 2016

tccagcttta agaagctgcc gctgttctt gtcacatgat gaatcaacgg gatggttctt 60  
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 ggggatgaaa ctctcatatg gagtctgcag actgcaagta atgagggtga gcatttgatg 180  
 gttgatgttc ccaggaagca gggccagcgt tgccagtttt tttggcacga aagagtaaatt 240  
 g 241

<210> 2017  
 <211> 357

<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A3

<400> 2017

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 tgttctctgtc cgtgtccctc ggcggtgcgcg ccgccggcgc cggcgccggc gttgacatca 180  
 aggtgtcgtg tgcagcgacg ccggaccggg acgtgtgcct gcgcgcgctc caggcggaca 240  
 gcgactccaa gaccccgcg gacctggcgg aggcggcgct ccgcgcggcg acgaccgcg 300  
 gcggcgcggc cggcgactac gcccggcacg agatggacgt ggttaaggac aacgaca 357

<210> 2018  
 <211> 405  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A4

<400> 2018

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 agaagtccct ccgcagcgcg ggcgctgct gctgctcgcc gtcggcctcc tccgcccctg 120  
 ctggtggtgt gcgcggcaac gaagaggcgt cgacgtcggc gctggcttcc gcgccagatg 180  
 gcaagaaaaa gaagaggtgg aggaagagaa agttctggag aaagaagaag aaggccaaga 240  
 aggagagcga cgatggcagc ggcgagctcg tggatctcgt caacagcttc tcggccaagt 300  
 ccgacgtgtg caagaacgtg aatgcggccg aggagatcct acggggctgc aaccagaaca 360  
 tgcccagcag ggcgctgacg ttcagccagc tgggcgccgc gaacg 405

<210> 2019  
 <211> 398  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A5

<400> 2019

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ccagaccaac ctggtgccct accctaggat ccacttcattg ctttcgtcct acgctccagt 120  
catttctgct gagaaggcct accacgagca gctgtccgtg gccgaaatca ccaacagcgc 180  
cttcgagcca tcttccatga tggccaagtg cgacccccgc catggcaagt acatggcatg 240  
ctgcctcatg taccgtggtg atgtggttcc caaggacgtg aacgctgctg tggccacaat 300  
caagaccaag cgcaccatcc agttcgtgga ctggtgcccg actggcttca agtgccgaat 360  
caactaccag cctcccaacg tcgtccccgg gcggtgac 398

<210> 2020

<211> 362

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A6

<400> 2020

acaagcaact agaataaggc catgtacgtg gtggacccca gcggcaaggg cgactacacc 60  
aacatcacccg cggcgctgga ggatatcccg gtgagcaaca ccaagcgcgt gatcctggat 120  
ctcaagccccg gcgctcagtt ccgcgagaag ctgttctga acatcagcaa gccgttcac 180  
acgttccggt cggaccccaa gaagcccgcc gtcgtggtct ggaacgacac tgcggccacg 240  
aacggcaagg acggcaagcc ggtgggcacg gtggggagcg ccacgctggc ggtggagtcg 300  
gactacttca cggcgtagcg cgtggtgttc cggaacgacg cgccgctggc caagcccggc 360  
gc 362

<210> 2021

<211> 364

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A7

<400> 2021

tcaagactga gtcgtatcac cctcgtggcg ttgttgtctg ccggcctctt cccgcaggcg 60  
ttagggaacg gcaagggcaa ggtgcatggc ggcggtgccg tcaaccgct ggttgccggc 120  
atctgctctc gcgccccatt cccagaggtt tgcacggcca cagccgggcg ccatgcatcc 180  
aagtaccggc tcatcgacaa tttggccgtg ctgaacatgc acgtggccgc gttcgccaag 240

gcacacagcgc aggcgcggaa gcacgtcgcg gtggcgggccc gcactattcc accgccgcag 300  
gcacaggccc tcaggacctg cgacacgatg tacatgaaca cgcaggacgc catcggcgcg 360  
gcgc 364

<210> 2022  
<211> 394  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A8

<400> 2022

acaagcctct agactgagtc ctctactcg cggcggtgct cctccctct tegtcccca 60  
gcgacgcagg caggcgcgcg cgcggccatg aagggggcg gtgccatgag gccgtcgct 120  
atgttctacg tccacgaggc ggacgtcgtc cagatccacc acttcctcga ggagtgtctc 180  
ctctgcgcca aatcgctctc cggcgacatc ttcattgaca ggggtgacac gccgttctgc 240  
agcgaggagt gcagggagca gcagatcgag gtggacaggg cgaagcaccg gcggaagaag 300  
cgcgcgggcg cgacgcgct gtccgcacgc agcaggagc accggcacca gcagcagctg 360  
cagcagcacc accaccagca gcagcaaccg cagc 394

<210> 2023  
<211> 248  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clóne ID: LIB148-046-Q1-E1-B10

<400> 2023

agtcgtatta aacncgcgca cttggcgctg gccctcgata tcggggagtg catgtcgttc 60  
ctcgtcaccg ccgaccagaa gcccggcgac gacgtgctgg ggggtgtccac cctgttcac 120  
aaggctgtga acagcatcag ggccgtgatc tgctacgggg gctccgacac cgcgccgctg 180  
gccaacgtgg cggccagtcg catcggggtg gcgtcgtcca tgcaagcact gcaggtcctt 240  
ccgtgga 248

<210> 2024

<211> 210  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-B12

<400> 2024

ttgcaactcc ctgacgtgag tcgtattaaa aaaaaaaaaa aaaaaaaaaa aaaaaaagaa 60  
agaaaaaaga aagagcaaaa aaaaaaaagt aaacaagaca gaaacgggga aggcacatct 120  
aaagggtgct tagagggtca actcacttga ggtccgtcgg ccgtcttctt ttaagggaga 180  
gtcctggaat tccctgacgt aagcgaattg 210

<210> 2025  
<211> 450  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-H6

<400> 2025

attcgccggc cgaccacgc gtccaccac gcgtccgaaa gaaacaagcg cccacgaaca 60  
actacctgc caccaacaat ggctccagg tcctccattg tactcgccac ggtgatgttg 120  
gctgcgctgt tcgcggttg tttctgcacc accccgctca ccttccaggt cggcaaggga 180  
tccaagcctg gccacctgat cctcaccccc aacgttgcca ccatatccga tgtggagatc 240  
aaagagcacg gtggtgatga cttctccttt acgctcaagg agggcccgac tggcacgtgg 300  
acgctcgaca ccaaggcccc actcaagtac cccctttgca tccgctttgc tgtcaagtct 360  
ggcggctacc gcctcgccga cgacgtcatc cccgccgatt tcaaggctgg caccacctat 420  
aagaccacac tcagcatcta atcaacctct 450

<210> 2026  
<211> 391  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-G10

<400> 2026

tcgtattaaa agtctccgac gcggcgtctg cggtgccgcc gctgcctcct ggtgtcgaga 60

ccgccagcag caacggtgcc cgcggcgcca gcgtaggacgt ggaggataag cagcggcggc 120  
acgacgacga ctgccacccc gaagtcgttc ccgataagat catacgggag gacgcaccgc 180  
cagttgttgc agataccgct gccgccccca acatcacgga cgtggagggtg gagtccccca 240  
agaaaggagc ggcgccggtg ccaaagccca tcatcggtgt cgcgcagtg gaagacgtgg 300  
tggcggacaa gttcgtggct gtggtgaagg aggcgatcaa gaagccgat atggacgaga 360  
acgaagtggc gatgcggaga ttcttgggca g 391

<210> 2027  
<211> 431  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-G11

<400> 2027

caagcctctg acatgagtcg tcctaagcct ccgtttgcgg tgcgacagct cctccaggac 60  
cggccccgcg gcgcgtgccg tacgtgccag ggacgacgcc gggcgccga tggagtccac 120  
gtcgtcctac ttccacgcct tcggcaaccc cgacctcgcg gcggtggtct ccggcgacgg 180  
cggcagcgcg caggcccacc ggccgcgccg ctccaccgac ggcgcaagg cggaggacgg 240  
caggagcccc accaccacaa cggcgaggcg cgcgcgctcc atgttctgcg tccccgacac 300  
ggaggcggag gagcccaacg gcttctgga cgagtgcacc ctctgccgca aggcgctctg 360  
cggcgacatc ttcatgtaca gaggggacac gccattctgc agcgacgatt gcaggaggga 420  
gcagatcgac a 431

<210> 2028  
<211> 391  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-045-Q1-E1-G12

<400> 2028

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aaatcttggc atttccagaa tcagacttgc ttctggtgac gccagagatt gtcaagaaga 120  
catactgttt gaagatcagg caagagctga tgcacgcct tccagctgtg acgagtcgag 180

tggtgtagca agccttaaaa ttcagatttc tctgttgaat ataagactga gggcacttga 240  
 agaggatcag gagttcctca atcaggtatt gagttcgctc caatgtggta ctgatgggct 300  
 gcagtgtata caggagataa gcatgcactt agcagagttg cgaacagttg tggctcacta 360  
 aaatgaaaat ggttttgccc cgagttcaaa a 391

<210> 2029  
 <211> 268  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-045-Q1-E1-G2  
  
 <400> 2029

actcctctat caagcttcat gctaatcggc ggcggtctgc agttgcggcc agccatatca 60  
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 acctgaggtt aatcgaccag caggttgacc acgaccactt agccatagac gatctgtatc 180  
 gttcgctcac acacacggac aactggttgc cccgatctgga cgcgctacct gcacactgcc 240  
 tgtcgctcct gcgcaacgac gatccgtt 268

<210> 2030  
 <211> 420  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-045-Q1-E1-G4  
  
 <400> 2030

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 taggttgcag gaggagaagg cgcgatgca gatggaagca ctgcagcacc tgaggatgat 120  
 ggaacagcag gctgaccacg accacctagc gatacaggat ctgcatgatt tgctcacaga 180  
 gagggagaaa gaattgctcg acttggaacg tgaacttgca cactgcagga ggctcctgca 240  
 gaacgacgat ccgttcaatg gcgacagatt tgatggcact gattatacaa cgaacaacaa 300  
 cacggatttt gtggggagcg ccatgtccca ttttgaagac gacaaggcat acattttgga 360  
 atccttgagc agactggagg aaaatcttgg catttccaca atcagacttg cttctggtga 420



<210> 2031  
 <211> 437  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-G7

<400> 2031

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gatgatccgc gcctacgcac agtcggtggc gacactcaac ctgctccgcg cgttcgccac 120
cggagggttac gctgccatgc agcgcgtcac tcagtggaaac ctcgatttca tggatcacia 180
cgagcaaggt gataggtacc gtgaattggc ccataaggtg gatgatgctc ttgggttcat 240
gactgcatcg gggcttacag tcgaccaccc gataatgacg actactgact tctggacctc 300
gcacgagtgc cttctcttac cctacgagca ggctcttacc cgtgaggatt ccaccagtgg 360
ccttttctat gattgttcgg cccacatgtt gtgggttggg gaagcgaatc gacaactcga 420
tgacacatcat gttgaat 437
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<210> 2032  
 <211> 421  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-G9

<400> 2032

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ccgcgtgcgc aaggggccgca ggcgctctgc ctccgcgggc caggccacgg agatatatga 180
gtcctctcgtg gacgacaccg gcacgctcga agtggttgcc ggtgccgcca atgccgtggc 240
gctgcccgtg aaaccgcct tgcacatgga ggaaaagggg gagctggaga aggaggtgtg 300
ggccacgttc tacggcaccg gcttttggag gagcccgtcg cagctggacg acaactacga 360
caggtgatcg ggacaggctc gcgagcgagc tatccacaag ctctccggc gatgcgtggg 420
c 421
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<210> 2033  
 <211> 408

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-045-Q1-E1-H10  
  
 <400> 2033  
  
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 gacgacgtcc ccgccgcgcg cacgcctgct cgccatggcg ctggcgctgg cattcgctg 180  
 cgtgtctgtc gtcagggtccg cggacgcgcg cacgcccggc ggctccgcgt acgggtgcaa 240  
 cccggccacg gacaggacgt gcaggcccgga gggcgctcggg gtgggtgctgc ccgacggcgg 300  
 cattgacctc gacggcgacg gcgacgagga cgagctgccg cagttcgacc cacacttcac 360  
 gatcctcggc catgcccagt gagtgtgagt gcagggtgcag ctggctgg 408

<210> 2034  
 <211> 416  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-045-Q1-E1-H12  
  
 <400> 2034  
  
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 cggagtccac acacacatcg tgtcaatcgc gggcgtaata aggagccgcc gccgcgtgtc 180  
 cgttttcttc tacgtcgtcc tcgccgcagc tgcagctgca gccgcggcgc aggcattcaa 240  
 taacgtcacc tccgacgagg agtactgggc ggagcgcgcc gaggtggctc ggtcgcgcaa 300  
 cctcgccgcc tacgtcagcg acccgtggc cgccacgaac cgcttcaacg cggacgtgct 360  
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<210> 2035  
 <211> 340  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-045-Q1-E1-H2  
  
 <400> 2035

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 ctccgagtggt tggctgggta ggctcgtttc gaggggaacg tttttatggt agcaccactg 180  
 tcgggcttca ccaaagagga ttccgtcgac ctcaactgcg tgagggttcat tgcgctcacg 240  
 agcctatacg gcacgcacgc cgatgattgt gtgcacaccc tgggcgattg ccatgtgtac 300  
 tatgccgatg tacaacggta gaattagtga gacagcagct 340

<210> 2036  
 <211> 403  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-045-Q1-E1-H4  
 <400> 2036

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 tgttggcgct cctagtggcg gtcgcgcgcg tggccgcgtt cctcggcggt cgggcctcgg 180  
 cgaagtccgg ggagctgagc gcgatggggt tgctggcggc gaagggcggc agcgcgcgcg 240  
 gcccgagaa gtgctcgggc gcggtgggcg agtgcgacgt ggacgaggcg gaggagctcg 300  
 ggctgagcgg cggcggcctc ggctccgacg acgcggtgcg gcggacgctg gcgcagcgga 360  
 agccgaccaa ccggtacatc agctacgcg cgctgcgcgc gga 403

<210> 2037  
 <211> 443  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-045-Q1-E1-H5  
 <400> 2037

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 aaggccaaag ctgaggagaa gacgacgcag ccaactaagg ccgtggaatc tgccaagtgg 180  
 aggacgaagg atgaaggag gagcaacgaa gccacagagg agggcagggg caagtctacc 240

actactgctg ccacccagga gaggaagaac aaggtgatgg ccttggttgg gaggtttgag 300  
 actgccatgt ctggctgaga agagatcaga acgaggtgat gtcaaaagac tgctctggct 360  
 catgaaaatg tgtacgagta ctactcaact gtgcaggcgt ggaggggttcg tatgtgtcgt 420  
 ttcattaatt aatgtggctg ttg 443

<210> 2038  
 <211> 416  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-045-Q1-E1-E7  
 <400> 2038

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 cctaagcggg tcagggaaaa gcacgctcgc gtgcgcgctg agccgcgagc tgcacggcag 180  
 atgccacctc acgtacgtcc tcgacggcga caacctcagg cacgggctga acagggacct 240  
 cagcttcgga gcagaggacc gcaccgagaa catccgcaga gtaggggaag tagcgaagct 300  
 gttcgccgac gctggcctcg tctgcatcgc cagcctcata tcgccctaca gaagcgaccg 360  
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<210> 2039  
 <211> 416  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-045-Q1-E1-E8  
 <400> 2039

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 ggggggacag gaaatcagcg gccatggcct cgattccggc gacgaccttc gccgtcatct 120  
 tatccgtcct cttctgtgcc gcggctggca ccgccgtcga caacgacctc cccgactacg 180  
 tcatccaggg ccgcgtctat tgcgacacct gccgcgccgg gttcgtgacc aatgtcaccg 240  
 agtacatcgc gggcgccaag gtgaggtctg agtgcaagca cttcggcacc ggcaagctcg 300  
 agcgtccat cgacggggtg accgacggga acggcacgta cacgatcgag ctcaaggaca 360

gccacgagga ggacatctgc gaagtgggtct tgggtggagag cccgcgcaag gactgc 416

<210> 2040

<211> 408

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-E9

<400> 2040

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ggaagggtgcc tcatctagct caacctcaat gagcagccag aggagtgaag ctcatgatga 180  
taggatgatt gcaatgggtc tctccgaaga atatgccaa ttagatgggtg ctatggccaa 240  
gcgtcttact aatttaacat caattcctca tgttccccgt attaacacat actttccaac 300  
atatagtgat gccactatgg accattatcg cctccttgat aggctaaatg catacggctt 360  
gtttgagggtg agagtatctg gtgatggaaa ttgtcagttt cgtgcact 408

<210> 2041

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-F1

<400> 2041

acgcgtccag aaaaacttgc caagcagcta gcaaccaacc caagaaagct agacaccata 60  
cccatggctc gcgctagcgt cgtcttcgtc attgctactc tcctcttcgt cgccatgggtt 120  
gtggcaccga tggccgaggc aaagtccgct gatgccccct ccgccgacgc ccccgcccc 180  
gctgctgacg cacctgccga tggacctagc ggaccggcgg gtgcacctgg tccccagggc 240  
gtcgaggggtc tategggcaa tgaggacgac gatgatgact ccaccaacta aggccaagca 300  
cgtcgggtccg gttgcatttg gaacaagaca tggaagaaaa gtgagagcaa tgtcctttta 360  
aaccaaaagt ccataataat gtgtgggtcat ccgtgatatg ttcttgctcc ccctcttttt 420

<210> 2042

<211> 440

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-045-Q1-E1-F10  
  
 <400> 2042  
  
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 cagccaagag ctatccatac gcacagcgat gcaccagcac gagatactag ccatcatgcg 120  
 cctgtcgtcc ctctcctcgt tctgtggcgc cctctcggcg cgcgcgcggg cgcagcaggt 180  
 gccgccggtg ggcggcagcg ctctgaagcc ggactactac agccagtcgt gcccgcgcgc 240  
 ggagaggatc atcgcggagg tgatgcagac gaagcagatg gcgaaccgga cgacggccgc 300  
 gggcatgctg cgcgtcttct tccacgactg ctctcgtacc ggggtgcgacg cgtcgggtgct 360  
 gatcgcgtcc acccagttcc agaagtcgga gcacgacgcg gagatcaacc actcgtctcc 420  
 cggggacgcc ttcgacgccc 440

<210> 2043  
 <211> 392  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-045-Q1-E1-F11  
  
 <400> 2043  
  
 caagaagcaa accagcaatg gccgcgcct gcgtcttct cgtcgtgctc ctcttagccg 60  
 ccgtcgccat ggcgcggttc gcgggcgcgg cgcgcacga cgtcgtcgag ggcaggtcca 120  
 tggcgtcgcg ggacgcaccg gagggcgcgg ccgacgctcc cgtcctgct cctggccccg 180  
 actcctctc gaccccgctg ccggcacct ccagcagcag ctcttccgac tagccgcccc 240  
 gcagagatat ctacggcgtc cgatcagtct ttggcgccac ctatgaccta tcggatcctg 300  
 caaagctatg tatgattcta tggataatg tgtggttggc ggaaacgccc ggaaataatg 360  
 tgcttgctg attggttttc tctctctttt tt 392

<210> 2044  
 <211> 424  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-045-Q1-E1-F12

<400> 2044

ctctggagaa agtcgtcata atccgcggca tcacgtgct caacagcaag ttcttccacc 60  
tcaacatctt cgagtgaag aacgtgctga tcgacaaagt gacggtcaag gccccggcg 120  
acagcccaa cacggacggc atccacatcg gcgactccag caacgtgacc atcagcagca 180  
ccaccatcgg cgtcggcgac gactgcatct ccatcgcccc cgggagcaag atgatccgca 240  
tccatggcgt caagtgcggc ccaggccacg gcatcagcgt cggcagcctg gggcgctaca 300  
aggacgagaa ggacgtggaa gacgtgcagg tgacgggggtg cacgatcgcc ggcaccacga 360  
acggcctgcg catcaagtcg tacgaagact ccaagtcgtc gctcaaggcc aacaagttcc 420  
tgta 424

<210> 2045

<211> 408

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-045-Q1-E1-F3

<400> 2045

taccggtctg atgctcccg gtcgctncac gcgtccacag aatcagctac aaaccatgat 60  
ccaatcctag cggctagcga tctctagttt atattacaat taggagcaag cgatccaatt 120  
atcgatagag cgcgagatcg atcgatcatg ccgggcccgt cgggtggtctc catcctctc 180  
ctcctctctc atggcctcct ctgctgcag ctggctgcct tggccgagat ggacgacgac 240  
gacgtcatgg aggacggcag ctgcatgcat ttcagtgtgt ccccgccgcc tgctccgccc 300  
gaggacgcgg atgagcggcg cgactatttc cgcgccatgc aggccaagga tctgttccgg 360  
cacgagcaga tgatcacgat gatgggcaac gaccggaaac gcaacagc 408

<210> 2046

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-F4

<400> 2046

cacgcgtcaa gagcctcatc ggcacgttcg atgagatcca agacgggcgc agcgggggtgc 60  
cgcccagcga cttccccaag tggctgccgg ccaccacagcg gaggctcctg cagcagaccc 120  
agaagcctaa cacggtggtc gcccaggacg ggagcggcga cttcaagacc atcaccgagg 180  
ccatcacccg cgtgcccac accttcgagg ggcgcttcgt catctacgtg aaggccggca 240  
cgtataagga gtacgtcacc gttcccaaga acatggccaa catcttcatg tacggcgacg 300  
ggccgacaca gacggtggtc accggcgaca agagcaacgc atgccgcttc gccaccttcg 360  
cctcagccac cttctctgct gaaggcatcg ggttcatctg caagtcgatt gggttcctca 420  
acacggcgg 429

<210> 2047  
<211> 376  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-045-Q1-E1-F7  
<400> 2047

acaagcctct acaatgagtc tcacatctc actcaccg ctttcacgcc tccctcacca 60  
aataaggctc cgcccttttc cgacattcac aggggggaca ggaaatcagc ggccatggcc 120  
tcgattccgg cgacgacctt cgccgtcatc ttatccgtcc tcttctgtgc cgcggctggc 180  
accgccgtcg acaacgacct ccccgactac gtcacccagg gccgcgtcta ttgcgacacc 240  
tgccgcgccg ggttcgtgac caatgtcacc gagtacatcg cgggcgccaa ggtgaggctg 300  
gagtgaagc acttcggcac cggcaagctc gagcgctcca tcgacggggg gaccgacggg 360  
aacggcacgt acacga 376

<210> 2048  
<211> 439  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-045-Q1-E1-F8  
<400> 2048

ctcgcgggct gacacacgcg tctaccaca cttccggtag caaatgttgg agattctaga 60  
gctgttattt ctaaaggagg acaggcgatt gcggtttcaa gggatcacia acctgatcag 120



acagatgaga ggcaaagaat tgaggatgca gggggctttg ttatgtgggc tgggacatgg 180  
agagtgggtg gcgttctcgc tgtctctcga gcatttggtg ataaactctt gaagccgtat 240  
gttgttgctg accctgaaat caaggaggag gtggtcgaca gctccctcga attcctcatc 300  
cttgctagcg atggactctg ggatgttgct actaatgagg aagctgttgc catggccaag 360  
cctatccagg acccccagga agcagcagac aagcttctcg aagaggcttt cccgaaggga 420  
aactccgatt acatcacag 439

<210> 2049

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-F9

<400> 2049

gggtccgacc acgcgtccga gcaagcgtcc gatcacaagg agaaggggaa gggcggcgag 60  
ggaaggggtc cgcgtcgtgt cccttctctt cctcctcctc ctcctcctct ctccaacacc 120  
ccatccatca gcgctgccct ccgcattgct cttgatccca tccagtacat cgattctccc 180  
ccaagatca aaggccggag gaggaagaaa ggtagggag tcggccatgg gatgcttttc 240  
atgctgctgt gtggcagatg acgacaacgt tggcaggagg aagaagcatg acgatcccta 300  
tgttcctatc cctgctcatg tttataatth tggacctagc cggttccag cccaacccc 360  
tgtcatctcc actggcagag ctccagccaat tgcagtaccg gccattcatc tggaagagct 420  
gaagg 425

<210> 2050

<211> 336

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-E4

<400> 2050

cgtcgcgcaa cgggtgggcgg tggccggtgg caatggcgcc cactgacttc ctccggatcc 60  
ccttctctcc cgcccaggc cgctccgcta acgtcaacgc cctccgtcc tggtccccc 120  
gccgccgttc tctcaaatcc agcgcgacca acggtgacaa ttccctcccc aatcccatct 180

ccacctctcc cacctcgccg ccttggttaa cgtggtgga cgttaacggg ttgcgtcgcc 240  
cgcccgcgcc tgtttccgcc cctaccatcc ccggggacgg cgggtcccgg ttgctgctc 300  
ggccgttcac tagcgcggaac gtcattggggg cggatt 336

<210> 2051  
<211> 415  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-045-Q1-E1-C8  
<400> 2051

tcgcggggccg acacacgcgt ccaaacggcg ccatcatcag gtccgagcgg ccgagcgcca 60  
ggaactgcct cgccgacgag agccacgtgt gctggaggaa cggcaagttc gcgcaggaca 120  
tgatcctccg gctcaggaac gtcgagagcg gggagataca gctgcagctg cagtgggtga 180  
acttcctcc tggctctgct cctgctgctg caacaaccag gtgacctgat cgatggtagc 240  
tgctgttcct gtcgccattg cctcctgctg gcaggaacag gaactctctg aagcacgggg 300  
tcagggtagt tcatgttgct tcgattcgat cgtaggggag ataatgccgg atggctttgt 360  
aaagtttggg aggacatgca tcataattga agtcaagtga taggatcctg ttttt 415

<210> 2052  
<211> 115  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-045-Q1-E1-C9  
<400> 2052

cgtattaggt aggatggcgt tcattcatcaa tgcgcagtg aacgctgcgg ccgtggctgc 60  
gctgctgctg gtctcagcgg tgctgcctgt cgcgctcgct gggggggctg ctgtg 115

<210> 2053  
<211> 297  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-045-Q1-E1-D1  
<400> 2053

cggatctatg atgtgccctt gcttgattcg ttattgggtc tctagccaag aagatgaaga 60  
 acaacaacaa caacaaaaat atatatatgg tgctgcgtat gccattgta acagttgatg 120  
 agatctgtga ctccccgtgc cgtgtcccggt gagttgctga tgatttcac ccccgcccc 180  
 accgggncca acacacacac acttttttta atctttcccc ttaatatggg gtcccaaatt 240  
 gatgcggaga tctcgagcga ctctgcaaat ttcagatgag tggacatatg tcgaagg 297

<210> 2054  
 <211> 433  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-045-Q1-E1-D10

<400> 2054  
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 atttcagaag agaactagct actccgatca agatgagcga cgaaggattg tacgtatatt 120  
 gctgagagga gatcgaagag acggtgatga gttggcggaa gatcgatgca tgcgtggatg 180  
 atcatcacag ccaatcgtac gtgtgtaaaa ggtcngccgg aggggggaat aatcgtgcat 240  
 gagacacctc tctcgctcgc tcttcctctc ctacgtctta attcattggg ttcgtcgatc 300  
 cgagatccta cgtacgtcgt cgtttttgta ttgtatatat tataggatcat catctcgtgg 360  
 gggatcatcag atctggcggg ttggtggtgt gttgtaattt gtaaagagat cgatcaaggg 420  
 tgatgcggtg tgg 433

<210> 2055  
 <211> 395  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-D11

<400> 2055  
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 gccgatgtcg ccaacgccgg ccacgccaag cccctgacgc ctggcggggcg tgtggtacac 120  
 gacaaccacg gcaagttcac ggccggggccg tggaaaccgg cccacgcgac cttctacggc 180

gggcgggacg ggtccggcac cacggcgggc gcgtgcggtt acaaggacac gcgcacgcag 240  
 ggggtacggcg tgcagacggt ggccgtgagc acggtgctgt tcggtgacgg cacggcctgc 300  
 ggcgggtgct acgaggtgcg gtgcgtggac agccctagcg ggtgcaagcc cgacgcggcg 360  
 gcactggtgg tgacggtgaa cgacctgtgc cccgc 395

<210> 2056  
 <211> 401  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-045-Q1-E1-D12  
 <400> 2056

cgtatgaagg acgcgccgcc agttgttgcg gagaccgtg cgcggccac caccacggag 60  
 gtggaggtgg agtccccaa gaaaggagcg gcgcgggtgc cagagcccat cgtcgttgtc 120  
 gccgcagtgg aggacgtggt ggcggacaag ttcgtggcgg tggatgaagg ggcgatcaag 180  
 aagccggaga tggacgagaa ggaggtggcg atgcggagat tcctgggcag ccgggtgaag 240  
 acagcgatgg agccgcggtc agagtcggag cagccgcggc gccgggaggt ggctcggatc 300  
 aacgacgtga tcgaggcggc acgcaccaag ctgatgcaca agcggcagtg cagcagggtc 360  
 aaggcgctcg tcggcgctt cgagactgtc atagacacc a 401

<210> 2057  
 <211> 391  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-045-Q1-E1-D4  
 <400> 2057

acgcgtccag atggttcgtg gatggctgcg ccacgacctc tcctgctgtc gctgctggtc 60  
 gccgtgctag cgggtggcgc cgatgtcgcc aacgccggcc acgccaagcc cctgacgcct 120  
 ggcgggctg tggtagacga caaccacggc aagttcacgg cggggcgtg gaaaccgcgc 180  
 cacgcgacct tctacggcgg gcgggacggg tccggcacca cggcgggcgc gtgcgggtac 240  
 aaggacacgc gcacgcaggg gtacggcgtg cagacggtgg ccgtgagcac ggtgctgttc 300  
 ggtgacggca cggcctgcgg ccgggtgtac gaggtgcggg gcgtggacag ccctagccgg 360

tgcaggcccg acgcggcggc actggtggtg a 391

<210> 2058

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-D8

<400> 2058

acacacgcga ccagtggaat tcgacgacga aactccgtca cgtcattcct ctgcgcctcc 60

cgtctggccg tcttcagac gtctccaatc ggagctcca gcgtctcgga gaagaggagc 120

agcacggcac ggccgctgtg gcgaggaagg ctctgtcct gtcccatccc aaccagcag 180

ccgtccaagg aggaggagat ccaatcggcg tgcaggcgtc caccgtccat ccatcgatcc 240

aattccaatc tgcaggcctc tgcgtcgcg cttgttcgtg gaggagaggt tgctgtggaa 300

cccgccgcca gttagccatg tcgtcctccg tgctgagggc tgcggccgac agggctattc 360

gcaggcacgc cctcacgctg acggacgccg cggcgttcag gatccgggag ctctcagcc 420

tcagggc 427

<210> 2059

<211> 232

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-E2

<400> 2059

tggagccggt catggcgccg tcgtcctctc tgcccgaggag cgccagcgag ctaccggacg 60

cgccgtcagc gttcatctcg aacacggcgc agtaccgct ctccgtgccc accacgtgct 120

aggttgctcg tatgttgctc gtcgttcggc cacatggtga gcccgccac ccacacatcg 180

ccgatgacgc ccagcagaaa gcatgaccac aagcctaagc cgaggccgga cg 232

<210> 2060

<211> 426

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-045-Q1-E1-A9

<400> 2060

cctctaaact gacgtcctag tactttcttca tgggtgggggtt cgccccgctg acgtcccgcg 60  
gctcgcagca gtaccgcgcg ctgacngtgc cggagctgac gcagcagatg tgggatgcca 120  
agaacatgat gtgcgcggcg gacccgcgcc acggggcggtta cctgacagcg tccgccatgt 180  
tccggggcaa gatgagcacc aaggaggtgg acgagcagat gatcaacgtg cagaacaaga 240  
actcctcta cttcgtggag tggatcccca acaacgtcaa gtccagcgtg tgcgacatcc 300  
cgcccgctcg gttgcccatt gcctccacct tcgtgggcaa ctccacctcc atccaggaga 360  
tgttccgcg cgtgagcgag cagttcacgg ccatgttccg gcgcaaggct ttcttgcaact 420  
ggtaca 426

<210> 2061

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B11

<400> 2061

gtattactcg aaaccgagcg ccgcgcggca ctggaggccg cccctcagc cgccgcgcgc 60  
cgagacggag gaggcggggc gtcgcgggct aataataagc gcggagtcg cgccgcgcgc 120  
ccgccgctgc tggacgagcc gtcgtggacc atgttctgca acggcaagaa gaccgggtac 180  
gcggtgcgaa ggcaggccac ggacgacgac ctgctgtga tggagacgct gcgggcggtc 240  
tccatgggcg ccggcgtgct cccggggagg gccgccctt cgtcggcgcc cgacgctgtt 300  
gctgcggcgg cagcggacga cgaggtgccc tacatgcgcg gctgcttcga ccacttcgtc 360  
gggttccggg act 373

<210> 2062

<211> 312

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B4

<400> 2062

attagcgttg cggctgttct tcgaccgctg ccgttcgtgt cgattggttc gttccgccat 60

ggaggctctg atgaagcccc cggtgtgctg tgcccatcgt gtgctgcgca tcgtcggtc 120  
 cagcgcagtc ggtgtctatt gctcatgacg agagctgctg gaatgacgac gaccaccatc 180  
 ctatctgctt tcccgaagac tgcttggcga cctgccatga tcaccggcac tcagaccgcc 240  
 gctgcaactg ggcatggtcg tggaggccgt attaccagtg cctgttggcg gactgccaat 300  
 aagctcgaac ag 312

<210> 2063  
 <211> 425  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B5

<400> 2063

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 ccctagggga tcgtcggaga ggaatcgcaa agagggccgt ctcatccgag ttaaggaagc 120  
 catggagcac aaggaggctg ggtgccaggc ccccgaggga cccatcctct gcatcaataa 180  
 ctgtggcttc ttcggcagcg cggcgaccat gaacatgtgc tccaagtgcc acaaggagat 240  
 gataacgaag caggatcagg ccaagctggc tgctcctct atcgacagca tcgtgaacgg 300  
 cagcgacgcc ttcatggagc cggttgttgc tggcagcaac acagtagtag ctgttgccca 360  
 agttgagttg caaacaatga acgtgcagca gcccgctgat gttgccggac ccagcgaggg 420  
 ggtgg 425

<210> 2064  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B6

<400> 2064

aactcctct agcttgactc gtagtacgac gagctgtgca tgctcacggt gccgcacggc 60  
 cacctcaagt cgtccaacat cctgctcgac ggccactac agccgctgct gacggactac 120  
 gcgctggtgc ctgtgatgaa ccagtcgcac gccgcgcagc tcatggtggc cttcaagtcc 180  
 ccggagcgga agcagttcgg ccgctcgtcc aagaagagcg atgtctggtg cctcggcctg 240

ctcatcctcg agatgctcac cgggaagccg ccgacctacg acctgcccac ggccggcgggg 300  
 gcggtgccgt cggccgaatc gttgtcgtca ccgcagaaac cgggtccggc ggccgggcaac 360  
 agcactgacc tggttaccgt cgtgggggtcg acccgggagg gcagtggctg ggcaccgtgg 420  
 tggacc 426

<210> 2065

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B7

<400> 2065

acaaccctct agaataagtc ctattaacgg gcacgcagtc gtggtcgccc tggcctcgcc 60  
 acggtgttct agtgcggtgg cgctgtgcct tggcgctccg actgccttcg tgggtgagtt 120  
 cgtggacggg aaccgaatgg cgctggggca attgctcgcc agacatgggtg taccgccgtg 180  
 gtgtagttcg gcgacgggaa ccgaaccac ctcacccaaa tcaccggtat gcgttgttca 240  
 cctgtgttcg cctaagactc aaaatacgta ggatcggtcg ggtcgtgtgt cggttgccag 300  
 gggacggttg tgcgtgcacc aaccatggcg ccgcgggggg ctggaaagct ggagctccgt 360  
 cgagctcgag aattttgcaa acatgacacc atctacggag ggcttcaaac tttt 414

<210> 2066

<211> 382

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-045-Q1-E1-B8

<400> 2066

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 agaaagggaa naatacaatc cacaattccg ggatttttcc cttacgggtg cacctgattc 120  
 catcaattta gttcctgagc atgctgcaac aaataaaaaa gtgttctca tgaacctctc 180  
 tgctcccttc atctgtgagt ttttctgtga tgcnaagag aaggctctcc cgtatgctga 240  
 cttcatcttc ggcaatgaaa ccgatgcaaa aatcttcgcc aaagttcgat gatgggagac 300



agagaatgtc gaggagattg ctttgaagat ctctcagctt cctttggctt caggcaaaca 360  
aaagaagact gcctgtatta ct 382

<210> 2067  
<211> 415  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B9

<400> 2067

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actcctcatt acatccttta tgagaggctg atcgattggg agatacgtac tcgggtggag 120  
cagaacaacg agagacatgg cgacgacgac gcgtgttgcc gccaccgccg ccggcggtgct 180  
gctggtcctg tcggcggttg cgaccctggc gcggggccgag gacccggtacc tgttcttcga 240  
gtggaagggtg acgtacggga ccaagtcctt gctgggctg cccagaagg tcctcctcat 300  
caacggcgag ttccccggcc ccaggatcaa ctgctcctcc aacaacaaca tcgtcgtcaa 360  
tgtcttcaac cagctcgacc atccgctcct tttcacctgg aacgggatgc agcac 415

<210> 2068  
<211> 456  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-C1

<400> 2068

accggtctga tgatccgggc ggccccacgc gtccacatgg tccaagtgat cttgccaagt 60  
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ccaggccggc aaggcggagg cccaggggcga gtaccaggcg gagcacgcgg cgagtgcggt 180  
caaggacacc gccggagccg cgcccgacag cgcgagctg cagcagcacc gcgccaccgg 240  
caccgttgag caggtggcgc agacggggcca gggcggtggcg gcaggcggtca aggacacggg 300  
ggcggggcgg gcggttgcg tcaccaacac ggtggcgggc gtggcgggcg gcgtcacgaa 360  
cacggtgacc ggcgcggtgg cgggcgtcac gaacacgggtg accggcgcgcg cggcgggtgt 420  
caaggacacc gtgaccggcg gccactgatc gacgac 456

<210> 2069  
 <211> 404  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-C10

<400> 2069

tccggcaata tcgggcgcca gagatcattc taggtgcagg atactcgttt tctgttgaca 60  
 tgtggtcctt cgcatgtatt gcttttgagc tcgcaacagg agaaatacta ttacaccca 120  
 aggaaggcca tggatacagt gaagatgagg atcacttggc tttaatgatg gaactacttg 180  
 gcaagatgcc gaagaagatt gcaaccatgg gaacacgac aaaggaatat ttgaccgcc 240  
 atggagatct gaagcggata cgaaggctga aattgtcatc cattgaacgt gttctcgttg 300  
 acaaatacaa aatttctgaa tctgatgccc gggaattcgc caattttctt tgccctttac 360  
 tcgactttgc accagagaag aggccaacag ctttagattg ccta 404

<210> 2070  
 <211> 410  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-C12

<400> 2070

tcataatatg ccagatgtac tgagaaaggc tgatattcat aagattcagg cagagcttgt 60  
 gtcattgtctt ccgtcgttac ctcaccttc agatctacaa aagctgaagg atgagctgaa 120  
 gacctcttgg aattctatgg aggttcttcc atctctgtcc cgttggcacc tcttggagtt 180  
 actcgcaaat tgtctgccac acagatttac ccatcccaat gaaacaagtt tgtctgttct 240  
 tcaaagcatg aaggaggatc tagcaagcct gattgcaccg caactgatca gaccaattgc 300  
 gcggtggcca ttctatgcct tcttgggagg agccatgttc tgccctcctgg ccagcagcac 360  
 ttgccacctt ctctcctgcc attctcgccg cctagcatatc attatgcttc 410

<210> 2071  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-C2

<400> 2071

cacgcgtcca caaaagcatt gaagccgtag ccgccgccgc cggacgagac aggttgaggc 60  
ggggcgga tggccgccgg ggaccttgag gtgctcaccg cgctcgacac cgcaagacg 120  
caatggtacc acttcaccgc catcgtggtc gccggcatgg gattcttcac cgacgcctac 180  
gacctcttct gcattctcct cgtgactaag ctccctcgcc gcattctacta caccgtggag 240  
gggtccgcga cggccggcac cctcccgccg cacgtgtccg cgctcgtcaa cggcgtggcc 300  
ttcgtgggca cgctgtcagg gcagctcttc ttcggctggc tgggcgacaa gtcggggcgc 360  
aagaaagtct atggcatgac gtcattgccc atggctctcg gctccgtcgc gtcggggctc 420  
tcgttc 426

<210> 2072

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-C4

<400> 2072

acgcgtccac agacgcgtgg gggcctgggtg aacgaccgg agatccgttc cgtggcggcg 60  
atggtggccg gcgacaaggt ggccttctac cactgcgcgt tctacagccc ccaccacacc 120  
ctgttcgaca gcgccggccg ccaactactac gagagctgct acatccaggg caacatcgac 180  
ttcatcttcg gcagcggcca gtccattctc cagtgcgccg agatcttcgt gaggcctgac 240  
cggcggacgg agatccgcgg ctccatcacc gctcaggtgc ggcaggagga ggacagcagc 300  
ggcttcgtct tcctcaatgg caaggtgtac ggcgtccgtg aggtgtacct gggccgcgtc 360  
accgcgccgg actcgcgcgt catcttcgcc gacacctaac tctccaagaa catcca 416

<210> 2073

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-A8

<400> 2073

acaagcctct aatgtgagtc gtagtacgca tcaacaatcg ccgagagcga tcgagagata 60  
aataaagatg aagaaagtgg catcatcgtc agccgtttctc ttcgtgctag cgctgacgct 120  
agtttgtgcc ccgctgatag cagaggcaaa gaagaagaga gtcgccgccg ccgccgccga 180  
ggagaagaag gtgcaggaca acttctgctc gacgctgtgc gagggcagga aggggatgga 240  
cctggtggtg tgcaaggagt cctgcgacct ctacacagcgc tccaacctgg tgctgtacgg 300  
ccg gatccag tgcaagggca agtgcaccga gcagaagggc atcaccgcgc cgcatgaa 360  
cgtgtgccaa gag 373

<210> 2074

<211> 284

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H10

<400> 2074

ggtcgacgca cgagtgaat cgccgtcgtc gtggggcttc acttctccta gaacgccgaa 60  
ggtcaagaag agaagaaggc gagacgtgca gtccgtcagg cagcgtcga taagagggaa 120  
gcaggaggag gctagacatc gaactcatca acgaaccaag tcgtacgtcg tgctcatcat 180  
cacgtgacgg cgcgtgccgc gtcaagctaa gtgtccagga aggggcactc cgcagcgatg 240  
acggtggtgg aggagtccgt ggggaaggtg gaggacactg cggt 284

<210> 2075

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H11

<400> 2075

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tacctgttcg ctcccggtc cctccatct ctttcgccac acgcgcgaga gggaggagag 120  
gaaacagcta gcagcgagcg aggaacgaag agggtgcttc gcacgtgcat gcgagatcga 180  
tcccgatcgt cggccggcgg gaattgaact agcgacgacg tacgtgacg cggggcgggc 240  
gttgattaa ttattccggc ctgagcaatg ggcaagatcg agtacggcgt ggtggcgcgc 300

ggcgcggtgg tgctggcgga gcactacggc gcgggcgcg cgggcgggcaa cgcgggcgcc 360

gtggcgcggc aggtcctgga ggcctccct ggcggcggcg acgacgactg caacg 415

<210> 2076

<211> 244

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H12

<400> 2076

ccggcaacca ccggcttccc tctccgtccc caaccgaccg accaacgcgc cgagcgaaga 60

tgctgtggca gacgtacgtg gacgagcacc tgatgtgcga tatcgagggc caccacctca 120

cgtcggcggc catcgtcggc cagcagggcg ccacctgggc tcagagcacc gcattccccg 180

atttcaagcc cgaggagatg gctgccatca tgaaggattt cgacaacccg gggaacttcg 240

cccc 244

<210> 2077

<211> 62

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H3

<400> 2077

tctcatacaa gccagggcct caccaggatg gtcattgcaa ttatcactgc aagtactggg 60

ca 62

<210> 2078

<211> 414

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-044-Q1-E1-H4

<400> 2078

gcacaaccaa gctcaacaac agccagctcg cgaaaataat gaagagccgc agcatggcat 60

catcgccgc gctcttgggtg ctagccctcg cgctagtggc ggccaccgcc ccacaggtag 120

cggaggcaaa gaagaagaga gcggcggaga gcggcgaggc ggcggaggcg aagaagatcc 180

aggacgactt ctgctcgacg ctgtgcgagg gcaagaaggg gacggacctg gtcgtgtgca 240  
aggagtcctg cgcgctctcc cagcagtcca acctgggtgt gtacggcagg atccagtgca 300  
agggcaagtg caccgagcag aagggcatca cggcgccggc catgaaggtc tgccangagg 360  
agtgcgacaa ggcgtacgtg gtgaaggcgg ccgaggttca caaggcctgc agcg 414

<210> 2079  
<211> 428  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H6

<400> 2079

cgtccaccct agcttgctcc tcgatccatc aattgcaaga ggagcaagat accaccaccg 60  
tagcaccaca cgcaggtacg aagaaggcga cgaacatggc gaggctggcc ttggtagcgg 120  
cggtggttct gtgccttcta ttagcgacag ggccgcacgg ggccgtcagc gccgatggga 180  
tggtgtcatt tgacaatttg atcagctgca aggtactggg caactgcgat aagaacctgg 240  
gccccgaggg ctcccgccca gggaaacccg ccaacgacta caccgcggc tgcaaccoga 300  
tcaccggctg tcgcggtga tcatatctct ctggctgatg tgcgcgcaat gtcaatgtcg 360  
cacgcgcgtg catgtaccag gccttagcgt gtggtgcgcg tgtgtgtata ttacacaca 420  
tgcatata 428

<210> 2080  
<211> 424  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H8

<400> 2080

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cctcatgcgc gactccccca cgcacatcgg ctcccgacc agggccgacg gcgacggcat 120  
ctccctcttc tccgccacca acgtctggat cgaccacatc tccatgtcca actgcgacga 180  
cggcctcatc gacgtcgtgc acagctccac ggggatcacc atctccaact gccacttcac 240  
caaccacaac gacgtcatgc tcttcagcgc cagcgactcc tggccgcagg accagatcat 300

gcagatcacc gtcgccttca tccacttcgg caggggcctg gtgcagcgga tgccaaggtg 360  
 ccgctggggc ttcttccacg ttgtcaacaa cgactacacg cactgggtca tgtacgccat 420  
 tggc 424

<210> 2081  
 <211> 193  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-A10

<400> 2081

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 atccgcagcc gacgtaccac caccaccggg ggagcgagat ggatatcaag atgatcctcg 180  
 tcgccgtcct cgt 193

<210> 2082  
 <211> 421  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-A11

<400> 2082

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 atgaactacg agcctatcgc tccctaccac ttcgacttga gcggaaggc cttcggctcc 120  
 ctggcaaagc ccgggctcaa cgacaagatt cgccactgcg gcatcatgga cgtcgagttc 180  
 agaaggggtgc gatgcaagta ccccgccggg cagaagatcg tgttccacat cgagaagggc 240  
 tgcaacccca actacctggc cgtgctgggtg aagtatgtgg cggacgacgg cgacatcgtg 300  
 ctgatggaaa tccaggacaa gttgtcggct gagtgggaagc ccatgaagct ctcttggggc 360  
 gccatctgga ggatggacac tgccaaggcg ctcaagggcc ccttctccat ccgcctcacc 420  
 a 421

<210> 2083  
 <211> 433

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-045-Q1-E1-A12  
  
 <400> 2083  
  
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 cacaggatgg tatcacttgc tcggacaggg tggcttgctg ctgcattggg gcccatgccca 120  
 atggccttct tctgatgtg gaaacaacag gacgtacgcg ctctggtagc aggaacagcg 180  
 atggttggcc tgagctcagg attcatcttc gccgcagcag tgtcagtgaac ctccgagctc 240  
 tttggaccaa acagcatcgg tgtgaaccac aacatcctga tcaccaacat cccgctgggg 300  
 tcactcctct atgggcatat cgccgccatg gtgtacgacg cgaatggaca aaggatgaca 360  
 ctgatggata atcgactgg catcattgac accatgattg tgtgcatggg ggttaagtgc 420  
 tactccacca cct 433

<210> 2084  
 <211> 337  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-045-Q1-E1-A4  
  
 <400> 2084  
  
 cagggtggcc tgctcttcaa gtacctgtaa aagggacaac accaagcaca cagcagaagt 60  
 atacgatctc ccgaccgacc gtggacaata tcgaataact cctgccaaat cgccagttcc 120  
 ttttgtgtac tgtgcgctag ccgcgcgcta gctgcactgc tgtatTTTTg tttcaggatt 180  
 gctgctgctg ttgcattca atcgttgggc ctcccggagc cgccggaggc gcgttttact 240  
 gttagcctta ctactcttac tccctgtage tccacgtata agaaaccgat gtccctgcgtc 300  
 tggcaatttg tcgtagtccc ttgatgatgg cgatgat 337

<210> 2085  
 <211> 359  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-045-Q1-E1-A6  
  
 <400> 2085



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actggccggg gagggctcag aaacctttca tccaatacat acatctatct gagccctttc 120  
ccgcggtgag gcccgaccg agtccacaca cacacggtgt cgatggcggc cgtaataagg 180  
agccgccgcc gcgtgtccgt tttctttctac gtcgtcctcg ccgcagctgc agctgcagcc 240  
gcggcgccagg catccaataa cgtcacctcc gacgaggagt actgggcgga gcgcgccgag 300  
gtggctcggg cgcgcaacct cgccgcctac gtcagcgacc ccgtggccgc cacgaaccg 359

<210> 2086  
<211> 447  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-045-Q1-E1-A7  
<400> 2086

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tgccacgccc gaaccgtacg catctctgaa cgtcgccggc ggccggcagc ccaacgagcc 120  
ggccggcgggg aggcgcgcca agctgtcgat ggagacgttc tcggggatga tcaagaggcc 180  
gttcgccaag ttcttgagcc cggatgatcaa gggcggtgtgc gccaaagcgg agtaccggga 240  
ggactgcgag tcgtcgatcg ggggcctccc gggggccgcg tcggcgggcg ccacggacag 300  
cgtgggcgtg ctgaagctgg ccatggaggg ggtgcggcag aaggccatcg aggcgatgaa 360  
cgcgccacg gacaggatga acgcgccggg cacggaccg acgaccaacg angcgctcga 420  
ctcgtgcacg tcgtcgtaca gcgacat 447

<210> 2087  
<211> 415  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-044-Q1-E1-G10  
<400> 2087

cacgagtcta aactggacgt cctggaacgt cgtacgagaa cttttctccc tcctccacct 60  
ttctcctttt cttgccacgg caaaacacct tcgccggcga gagcatggcg atggcgatcc 120

gtgtcctgga ggtcaccctg gtgtcggcaa atgacctcaa gaaagtgtcg ctcttctccc 180  
ggactcgcat ctacgcctg gtttccatct ccggattcga cctccgcata ctttcccaca 240  
gcacccaagc agaccacagc aacggctgca acccctgctg gaacgccgtg gtacacttcc 300  
ccatccccggc tgccgctgac acccgcggcc tcgcactcca cgtgaggctc cgcgcccagc 360  
gtctatacct gggcgatcgc gacatcggcg aggtgtttgt gcccatcgac gacct 415

<210> 2088

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-G12

<400> 2088

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gaacaaagac gtacgataac ctgcttattt tgcgacccat cccgttcca cgcaaaggcg 120  
ccgagcgtga tctccgtccg tgccgccatg gctcgcacc gggcgctgct gctgctgctc 180  
ctcgccgcgc cgctcgtcgc tgcgtggcc tctgtcgcat ccgccgacga cgccaacgcc 240  
atgcccacca tctgacccc cgtggcgcat acccgcctgg ggtccttcga cggcgacaag 300  
ccggcctctg acgacgacgc cgtcgacgac gacgaggacg cggccctgt cggcgcgccc 360  
aacggggcca ccatgactga gccagggac gacgtccccg ccccgcccg cgccgaagca 420  
accgcgggcg gcgcgcg 437

<210> 2089

<211> 406

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-044-Q1-E1-G2

<400> 2089

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aatccaaaaa acaaggcaaa ccgacccggt cccaaaggaa atccttcgcc gacgtacaac 120  
ggcaaccgaa ggacaaaaat ggagatgaaa aggatcctct tcgccgtcct cgtcgtcatc 180  
gccgcctcgg ccaccgcagt gctggcctcc accgaggccg ccgccgcggg cgccccaact 240

gcctccgagt cgctccgccga ggctcccgtt ggcgctggcg ctggcgctgc cgctggcgcc 300  
gccgccgagg ggcctccgc cagcagcggc ggcgccgcc tcgccgccgc gccgccgag 360  
ctcctcttct cncctctcgc ctactacct cactaagcgt gtgcgt 406

<210> 2090  
<211> 409  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-044-Q1-E1-G3  
<400> 2090

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cctcttctgc tcggccgagg caattgcccg gaccgtgggc gacaccgtgc aggacgcgtg 120  
cagcaatacc aagtccccca agatctgcgt ggacagcctc gtcgccaatc cggagagcca 180  
gaaggcgact ccgcgcaagc tggcagagct gtctgtgaac atcgcgggcg agaagggatc 240  
ctggataggc agcttctgtc accgcaagta cagcgacaag gatgacagcg acatattcaa 300  
gtgctacgac agctgctccg acaacgtgga ggaggccgtc gccacacctc acggactcgt 360  
ccgggagcca ccgacgcca gttcctcgag ctcaagtcgt agctctcct 409

<210> 2091  
<211> 395  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-044-Q1-E1-G9  
<400> 2091

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gcctcgattc cggcgacgac ctctgccgtc atcttatccg tctcttctg tgccgaggct 120  
ggcaccgccc tcgacaacga cctccccgac tacgtcatcc agggccgagt ctattgcgac 180  
acctgccgag ccgggttcgt gaccaatgtc accgagtaca tcgcgggcgc caaggtgagg 240  
ctggagtgca agcacttcgg caccggcaag ctcgagcgt ccatcgacgg ggtgaccgac 300  
gggaacggca cgtacacgat cgagctcaag gacagccacg aggaggacat ctgcgagggtg 360  
gtcctggtgg agagcccgcg caaagactgc gacca 395

<210> 2092  
 <211> 449  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-F6

<400> 2092

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tcataggacg atacacgcct ctacactcac gtcctaacag cccaacaag ttgtgtactg 60
ccaacggcgc ctccaaggtc accgtcaagg atgtcacctt caagaacatc accggcacct 120
cctccacccc ggaggccgtt agcctgctct gcaactgccaa ggtcccatgc accggcgtca 180
ccatggatga cgtcaacgtc gagtatagcg gcaccaacaa caagaccatg gctatatgca 240
cgaacgccaa gggcagcacc aagggttgcc tcaaggagct tgcattgctt tagaccctcc 300
gtcgactgac ccatctctct agttataatt tttctctcgt ccttgcatg cccattagat 360
gctatccatt ggtaacgcac aacagtaaaa cgacagacat ccgacagcta tattatgttc 420
gacggtgtaa caccctgaat ttgagggtta 449
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<210> 2093  
 <211> 435  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-044-Q1-E1-E2

<400> 2093

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cgctgcggcg gtggccttct ccttaccggg gctcgcttct cccttctccg ccttcccgcg 180
tcctcccgcg gccccgcccc cagcgggatc ggggccctc atgtcgaagg caaaggtcta 240
caccgacgtc aacgttctgc gtcncaagga gtactgggac tacgaggcgc tcaccgtcca 300
atggggtgag caggatgact atgaagttgt cagaaaagtt ggaagaggta aatatagtga 360
ggtctttgaa ggcattcaatg ttaacaatta tgagaaatgc atcattaaga tccttaagcc 420
tgtcaagaaa aagaa 435
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<210> 2094  
 <211> 364  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-044-Q1-E1-E4  
  
 <400> 2094  
  
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 ctctgctcc attgcgcgg atccggctcg ttcttgtgat ctgtctaccc gtttcttggg 180  
 tcagtgtcgg aagggtcaaac tggttggtga aacctcaccg ggggtgcttca acgaacgcga 240  
 aagtgtcact gtcatttagc gcgtcttgat tggatttgac ctgttggcct ggtggcgtgt 300  
 tgtccttgat tgagctcgag gatgactaaa tgggggctca gcagcggcac gcccgcgat 360  
 tcct 364

<210> 2095  
 <211> 264  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-044-Q1-E1-E9  
  
 <400> 2095  
  
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 gcagccgtca cacactcagt ggctctgttc atcggcggtg gctacctctg gtgactaatt 120  
 ttctaaggaa cggctctcta ttcctatact ctgaattcta tgccgagact agtagctaatt 180  
 tctgcacact tcggcgcgat gtggatatac agctgcgcgt cgcttgatag gagggctctt 240  
 atgggtgcgc gatgaatgat actt 264

<210> 2096  
 <211> 392  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-044-Q1-E1-F12  
  
 <400> 2096

tacaacaccc tgaggtgagt cgtattaaat tccacgataa catcaaccac gtccagatct 60  
gagtccagca catggtcctc ttccgcaagt gcatggagcc cgtggagaaa tgccctcggcg 120  
atgccaagat ggtcaagagc accgtggacg acgtggtgct cgtgggcggc tccacgcgca 180  
tccccaaaggc gcagcagctg ctccaggacg tcttcaacgg caatgagctc tgcaagagca 240  
tcaaccctga cgaggacgtg gactacgggtg ctgctgtcca ggccgccatc ctgagcggcg 300  
acggcaacga taaggtgcac gacctgctcc ttctggacgt cacccggtgt ccctgggcct 360  
ggagaacgcc ggcggggtga tgaacgtgct ga 392

<210> 2097

<211> 186

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-F2

<400> 2097

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gcacctgtag tattgtgacc atatgtactg tgctctcggc ttgtatatcg atagtagcat 120  
ataaagctac tactcccgat ttgtaactat agatctcggc attaaagcca tttttattttt 180  
atTTTT 186

<210> 2098

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-F4

<400> 2098

gggcgaaccc ttgggcggac ccttggggca atggcggcca aggtgttcct cctcctccga 60  
ctcaccatgg tcgccgtcgt cctggctgcc atcgccacat tattgtctcc ggaggaagcc 120  
gatccgcggg cactgccggc acagtggacc accgcgaaga agtacaaggc cacgatggac 180  
gccaagacgc ggcaggcttt cgacggcgtg gtggccgccg ctacggcaga gaagcggctc 240  
caggcgggtg aggccgtgct gcagcagcag ctgaacatgg acgtgtccct gtccaaggcg 300  
acgtcttccg gggacgagaa caactacgtg agcgtggccg ccgcctacga gaaggcccg 360

ggcgccgtca tcgcggcgac gccggacaac aagctccgcg ctatggcggtt cgcgttcgac 420

gg 422

<210> 2099

<211> 448

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D12

<400> 2099

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cggcgaacgt acaaatcaaa gtgcggcggtg cccgctcgca aactttgagt acgtactgct 120

actccgggtc gtcctcctct cttctccatc gccgttggtt ctctcacgcc acacgggtcat 180

ccgatccctg tccaccgcgt tgggagcggc gcagcccatg gacgacaacg agagagagaa 240

agagaatgag aatgagaagg agaagcacta cgggactgac gtcgaggatg aagaagagga 300

cgaggaaggt aacaagcgag tcgtggtgct tggccccag gtccccctca aggagcagct 360

cgagctcgac aaggatgatg agagcctgag gaggtggaag gagcaactcc ttgggcaggt 420

cgacacagag cagctgggag aaactgcg 448

<210> 2100

<211> 407

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-044-Q1-E1-D2

<400> 2100

aggtgaaggc tgtggatgcc ttcggcaacc tcttggtact tgaaaacctg caacaaccgc 60

accatgatga caacaacatg atgctaaaat ttccaaggc aagaaagttt gatatccaaa 120

aagcaaagca aatgtggtct gatatgctga agtgagaaa agagtccggt gcagatacca 180

ttctcgagga attcgaattc gaagaagctg ataagggtggc agaattgctac cctcaagggt 240

accatgggggt tgataaggaa ggcaagcctg tctactttga acggcttgga cagatcgatg 300

tgaataagct aatgcangtc actacaatgg atcgctttgt caagaaccat gtcaangagt 360

tcgagaagaa ctttgctggtt aagttcccag cttgctcaat cgccgcg 407

<210> 2101  
 <211> 416  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-044-Q1-E1-D7  
  
 <400> 2101

gacacaagcg tccgatctcg agtctcctta caagggccac gatgagggcg cctctcctct 60  
 cctcgctcct cgtcctcgcc gtgcgtcgcca ccgtgcctct actagtcccg gcggtgtgca 120  
 tctcgcgga cgacaagtcc gagagcaagg ctgacgaata agctgctgct actaccgttg 180  
 ccgccgacga gcatggctct gtcaagacca tgtccctcga cgcatacggg ccaactggaga 240  
 tggccgcca gaagcccaag gagcaggtcc tgaacgcgca agctacgctg gcgacgaccg 300  
 ctggcgctga cacatatgac cagaaacccg ttggtgaaaa acaggctgaa acggccacgg 360  
 tctccgctgc cgatgaacaa cccgacaaat acgtggaagc tctagttcct gacgag 416

<210> 2102  
 <211> 441  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-044-Q1-E1-C5  
  
 <400> 2102

tcacgggtcg acacaagcgt ccacacacgc ttctggaatt tgggtgctgct tggtaacaa 60  
 cattaaagtt caaggtcaat gaatcgtaca gctgcagata tatgctaggt agtaacaagg 120  
 ctgatattca ctogaacaag ctattcaatt gtactgctga ggaaccttcg actggggagc 180  
 ttttcaaaaag gatacttata ctgttttcag agatgtatgt gtcagaagat ttcagttcag 240  
 ggcgaatgct tgtatatgtg gcagcaggtg ttgtgctggg catgctgagt tcgatgttca 300  
 ttacggcctt attcagaggt atgtatgggt tggtgctcgc tgccgccagg tgggctgtga 360  
 ggaagcattg catcagagta tttgccagcc gggtgaagcg tgccctgcctt cttgtcgcct 420  
 atgtatccgc tggttgctgg a 441

<210> 2103  
 <211> 434



<212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-044-Q1-E1-B2  
 <400> 2103  
 ggtc gatgca cgcctctaaa ataaatcgcc taattctttc gatcgaatta ggcgccttct 60  
 tcgtcccacg ctccgtcttt atttgtaatc tgaagcttac aggaacattt gagtggatca 120  
 tggacggatt ggtaggcctc ttgaaagtcc ggggtggtgag gggcatcaac cttgcctacc 180  
 gcgacgcaag atgcagcgat ccgtatgtcg tcctacgact tggcaagaag aaacttaaga 240  
 cgagcgtgaa gaagagatct gtgaacccca tctggcacga ggagctaact ctgaccgtca 300  
 cagatcccag cctagctctg aagctggagg tgttcgacaa ggacacgttc agcaaggacg 360  
 acccgatggg ggacgcggag atcgacgtgg cgccgctggt ggaggcggcg aacgcgagcc 420  
 cggaggcgag cctg 434

<210> 2104  
 <211> 255  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-044-Q1-E1-B4  
 <400> 2104  
 ttatgtggct cccgttaacg acagggccgc agggggccat caccatcgtc gggatggtgt 60  
 catttgcgaa gatgatcaag ttcaaagtac aggagaactg cgagatgaat ctgggcccc 120  
 aggcaacgag tctaaggaca cccgccaaag attagaccag ctgttgcaac ccgatcaccg 180  
 gcgtctcgca gctgattata tctccctggc caaggtgcgc tcaaagtga ttcgcaaac 240  
 tcgttcatgt gccag 255

<210> 2105  
 <211> 330  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-044-Q1-E1-B9  
 <400> 2105  
 tacaaccccc tgacgtgagt cgtattacgt cagacttcgt cgccatctca aatggacatg 60

ttctctgggc tcaatctttc atatgtatga cgaggctgca tcttcgtcac cagcactcgg 120  
 ggcggatttg ggtgacatgg actctcatcg ggaagaatca ccacgtccat ttgacatagg 180  
 atttgcctcc gacgttgatg ccaacgacac gttaatagtt ctgccatcac tgcaacatgc 240  
 ataactacat caacgcattc tcaaagttct actctgagac ctctaacaca ccaatcgatt 300  
 tctgtacatt ccacaatttc atatatacct 330

<210> 2106  
 <211> 443  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C2

<400> 2106

gtcgatgcac cactctaaat tgagtcgtat aaaaccctca aagccgaagg cctcgtgcct 60  
 tctcttcttc cctggcatgg aggaagtacc tgtttcgctt atgatcgttg ccgccgtagt 120  
 gctggacaac aatggcgccg acgcggtctc ctgcactgcc atccctagcg taacaataag 180  
 cctagaggag aaagaaaata tcaatgggga tgttcccacg atcacctcgg ccgcaagcaa 240  
 cgaggaggag gcgttggtca gtgtcggaga atccaccaag gacgatggcc atcgcttgac 300  
 gatggaatgc accactcccg tctctccag tagcccttcc actcgcaaga agcgcggggc 360  
 gttcagcctc ttcagggcga tgttctgtc cttcggccgg agcgacgaca gcatgaagaa 420  
 gacagacgac gacaccacga gcc 443

<210> 2107  
 <211> 293  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C3

<400> 2107

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 atcgtgttct tcagcacggg ctagctagct cctccctcc cagccatggc gacgccggac 120  
 aacaaggggc acgggcatcc gctgcccaag tttggggagt gggacgtgaa gaatccggcc 180  
 acgtccgagg gcttcaccgt catattccat aacgcccggc acgacaagaa gaccaccacc 240

ggccctgggg ctgggaacgc gcgcgcatgc attccgccgg ccttcaggaa cgg 293

<210> 2108  
<211> 303  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A1

<400> 2108

tgcacctctc taaattgggt cgtattttaga tttgaaccgc ctttgtaggc gtcgggtggc 60  
gatcgacgat tctgatactg ctaggtccta ttcagttggt tccatctcgt cgtcagtcgt 120  
ctgcccgggtc acgtcgtgga tcggacggaa caagtcgggtg tgcagttgca tcatgaccgt 180  
ataccttaac actttgacgc tcggcacggt catctgcacc gtgttagaga tgcaggggat 240  
acggagcatc tctgcaggat actagactag caacgtctac tcatgttaca tagccagttt 300  
ccc 303

<210> 2109  
<211> 426  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A3

<400> 2109

ccgggatcca ctcaaacgac gcattctgcca acgcgtccgc ccacgcgtcc gatcgccatt 60  
acagaagaag ccgagtggac cctcaccgac gctaatacaag aagggcggag gtgaaggaag 120  
gaagactcca aatggtaaaa caggaaccaa gaagtaagca atccagatga aacttggttt 180  
tgctgtgacc aacttcacct tggtttagga cagataaaca tgttgatact atcgggtgat 240  
acattgatat ttgccacacg aatacgtcag tcctcttaag ggaggaggtc gctagatctt 300  
cgggcatctg ctgtaaata ctcgttgatt tgtttagta cgaacagaaa acggaccaca 360  
aaaaactcga ggatgggagg aagatcatca tcacaaggac gtttttggtta gatgtatatg 420  
ttgctt 426

<210> 2110  
<211> 425

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-044-Q1-E1-B1  
  
 <400> 2110  
  
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 aggtacgaag aacgcgacga acatggcgag gctggccttg gtagcggcgg tggttctgtg 120  
 cctcctgtta gcgacagggc cgcagggggc catcagcgcc gaggggatgg tgtcatttga 180  
 caatttgatc agctgcaagg tactgggcaa ctgcgacaag aacctggggc ccgaggcctc 240  
 ccgcccaggg aaacccgcca acgactacac ccgcggctgc aacccgatca ccggctgtcg 300  
 cggctgatca tatctctctg gtcgatgtgc gcgcaatgtc aatgtcgcac gcgcgtgcag 360  
 gtaccaggcc tcagcgtgtg gtgccgcgtg tgtgtatata ttacacacat gcattataca 420  
 ttggt 425

<210> 2111  
 <211> 434  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-043-Q1-E1-G10  
  
 <400> 2111

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 gcgcccgggt cgaggagctg aacatggacc tcttccgcaa gtgcatggag cccgtggaga 120  
 aatgcctccg cgatgccaa atggacaaga gcaccgtgca cgacgtgggt ctggtgggcy 180  
 gctccacgcy catccccaag gtgcagcagc tgctccagga cttcttcaac ggcaaggagc 240  
 tctgcaagag catcaaccct gacgaggccg tggcgtaagg tgctgctgtc caggccgcca 300  
 tcctgagcgg cgagggcaac gagaaggtgc aggacctgct ccttctggac gtcacccgc 360  
 tgtccctggg cctggagact gccggcggcg tgatgaccgt gctgattcct cgcaacaaca 420  
 acattacaac gaag 434

<210> 2112  
 <211> 206  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G11

<400> 2112

gggtccacgc acgcgtccga attcattttc accgggaaga tttgtaactg tcctcctccc 60  
tccttgtaag ttgctcctgt aaactcttcc tgaattcatg gcgtgctggt gtagcaatca 120  
ccacttcttc cctgtgaatg cccacagcgt gtcttggtaa aagcatgtat gtatgaatat 180  
tggagtatat gttactactc agctcc 206

<210> 2113

<211> 203

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G2

<400> 2113

tgagacgtat tatctcgaat ctccacttaa ctcatcgcga cctctctccg gccatcctcg 60  
ctgccgtctc catctccttc ggccactagg ctacgaaccc ctccgggacc agggaccgta 120  
tgccgtatct ctggcacgtc ttctcgccgc ctccgggacc tctcgtaata tcaatctccc 180  
tgcacctgga acgccgctcc agc 203

<210> 2114

<211> 272

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G4

<400> 2114

tgagacgtat tatctccagt ctcgatggaa ctcagatgag ccgcgctccg gccatacgcg 60  
ctgccgtcgg cgtcaccggt ggccgccagg gtcgcgagca ggagggggcc aggcactgtg 120  
acctgctctc cgagcggggg gttccccgaa gacgggcacc tcatgtacta cgaggcggcc 180  
ccccggttga acgcagtggg ggccgttgct acggaccttg gaaagctcca ggccatgggg 240  
ctcgtcccgcc gggacccagt caaggagaac gt 272

<210> 2115

<211> 416

<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G9

<400> 2115

gtcgatacac gaatctaaat tgcctcgtat cacagggggg acaggaaatc agcggccatg 60  
gcctcgattc cggcgacgac cttcgccgtc atcttatccg tcctcttctg tgccgcggct 120  
ggcaccgccg tcgacaacga cctccccgac tacgtcatcc agggccgcgt ctattgcgac 180  
acctgccgcg ccgggttcgt gaccaatgtc accgagtaca tcgcggggcg caaggtgagg 240  
ctggagtgca agcacttcgg caccggcaag ctcgagcgct ccatcgacgg ggtgaccgac 300  
gggaacggca cgtacacgat cgagctcaag gacagccacg aggaggacat ctgcgaggtg 360  
gtcttggtgg agagcccgcg caaggactgc gaccaggtgc atgcggacag ggaccg 416

<210> 2116  
<211> 376  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-H11

<400> 2116

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cctggtcctc ttctgcatcg tgcattggtga gaaggaagag tcaaagggca tcgatgcaaa 120  
agcgtccggg cctggtgggt ccttcgacat caccaagttg ggcgccctcg gcaatggcaa 180  
gacagacagc acgaaggctg tgcaggaggc atgggcatcg gcgtgcggcg gcaactggaa 240  
gcagacaatc ctcatacca agggcgactt ccttgtcgga caactcaact tcacaggccc 300  
ttgcaagggc gacgtgacca tccaggtgga tggcaatctg ctggcgacca cggacctaag 360  
ccagtacaag gaccat 376

<210> 2117  
<211> 404  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-H12

<400> 2117

cgtcgtcgtg ggccttcatt tctcctagaa ggtacaaggt cgagaggaga agaaggcgag 60  
 acgtgcagtc cgtcggggcac cgatcgagaa caggggaagca agaggctgct agagatcgag 120  
 ctcatcaacc aaccaagtcg tacgtcgtca gcatcacgac cggatggcgc gtgccgcgtc 180  
 cagctatgta tccaggaggg ggctctccgc agcgatgacg gtggcggagg agtccgtgaa 240  
 gaaagtggac gacaaggcgg tgaagctggg aactgtggcc atggacatcg ccagcgcgat 300  
 ggccaccacg actgatgaga agacggcggt caggggaacct gaacccgaga ccggatacta 360  
 cggtcgggtc accggcacga atgaggtgga cgccgccgac ctgc 404

<210> 2118  
 <211> 225  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-043-Q1-E1-H2  
 <400> 2118

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 tttccgacat tcacaggggg gacaggaaat cagcggccat ggcctcgatt ccggcgacga 120  
 ccttcgccgt catcttatcc gtctcttct gtgccgcggc tgggaccgcc gtcganacaac 180  
 gactccccga ctacgtcatc caaggccgcg tctattgcga cacct 225

<210> 2119  
 <211> 180  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-043-Q1-E1-H4  
 <400> 2119

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 ttagagagcg agcttttttt ttgatacggg ggagttaaaa aatccaaaaa tcttggtgta 120  
 tgtacagttc tgtctatgag aaatactaac gcgtcttgca gtgctgctgc ctgctgcctc 180

<210> 2120  
 <211> 136  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E4

<400> 2120

tattaacatt ttgccctcct ccaactttct cattttcttg caatagcatg tcactgttcg 60  
tcatgatagc acctcaagta tgcatttatg tcatatcagt gaggcttggg gcctgtaata 120  
tcagctgcac aatctt 136

<210> 2121

<211> 258

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E9

<400> 2121

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gcccgggttaa atttggaaca agacatggaa gaaaaatgag agcaatgtct ttaaaccat 120  
gaatccataa taatgtgtgg tcatccatgg atacatcctt gctctccctc tttttctttc 180  
tgtttgattt tcaatgtgtt atcatgttgt tagttaactg tatcgactca tggatatcaag 240  
gtctaaaaaa ttatcgtc 258

<210> 2122

<211> 336

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F5

<400> 2122

accacgcgc tccgaccatg acgtcgtact taacgcgtgg gcgagacgcg tggagggtcg 60  
aggaggcaag ctgtgtcagc gcacgcagca gatagggtcga gcgtgacgac catcagggtga 120  
ctcgtcgtag gaggggcttc gaggattgag gaggcagatc gccctcatgt acggatagtt 180  
ttaatggact aaaactcagt tctcacaaca cagtgatcag ttgtagggtcg aggccatggc 240  
atttaatgtt gttgcatagt agcttgacgc cacaggcaca gtgggtggcg ttgtgcctgg 300  
atcaatgact tccttggcgt aggaatgaat gcagtg 336



<210> 2123  
 <211> 225  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-D10

<400> 2123

ggctcgagccc gcgtccgaca cgagtccgcg caccagtgcc gacagcgaca gcatctcgct 60  
 cattctcggc catcaagttc tggatcgaca acatctccat gtccaaatgc aaagacagcg 120  
 tcatcgacgt catgcagacc tccactggga tcatcatctc catctgccac ttcagcaacc 180  
 acagcaacgt catgctcttc agcaccagcg attcctgggc ggaag 225

<210> 2124  
 <211> 431  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-D12

<400> 2124

gggtcgagca cgcgtccgcc cagcagctcc gcccacgcgt ccggcgcgac cagcagcagc 60  
 cgcaggacgc gcattgccgc tccgaggcgc tgggtgcagca ggtggccgcc gcggccccggg 120  
 agggccggctt gggcctggcc ggcaagaagg cgttgccgcg ctacgacgac acggcgcacg 180  
 accagttggt ggccactgcc gccgacaggg ccgccgagga ccgcatggtg gccttcacgt 240  
 acctgcgcat ggggccccgac ctgttccagc ccgacaactg gcgccgcttc gccgcgttcg 300  
 tcaagcgcat gacggacccg ggcgcgcggg aggcttgccg ggagcaggtg gaccgggagg 360  
 ccgagggcgt cgcgcaggcc acccagcccc tcgtgcacga ggccgccgtc gcgctcatca 420  
 actgaccgga c 431

<210> 2125  
 <211> 351  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E12

<400> 2125

ggggtcccagc acgcgtccga aaagtatcac atgatcatca tttcttcctc aaagaatgtc 60  
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 catgttgaca actcaagcag tcatgcttac aagacaaggg aacttgggaa gttcctggga 180  
 attttaacct tatatacaaa gatgaagaca agaatgatgg gcaaatttcc aaagtttaat 240  
 aatgatttaa ccttgaagga cattccttta caagggtccga gtttcacttg ggcaaactctg 300  
 caagctgatt cgggtgttgg aaagcttgac agtttagtgg gaacaactgt t 351

<210> 2126  
 <211> 370  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B9

<400> 2126

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 ggcctttcac gtcgtcgagg tgaagaagtc ggcaggcgac acgctggagt atgagatgtt 120  
 ctgcagcaag ggcctaagac cttcactcag cgacatctgc tggagcagcc gatctgagga 180  
 gaacatggct ccttcagtgg ttcagccatc ataattgaag ccatcctctt agaccgtctc 240  
 cagcacttta tccatatggg cteccccctc tagtcgattg ttattttaagt gcagcctctt 300  
 cggagatgca attacaatcc atcctctctt tctttttccc tttctcaaag agctaagacc 360  
 ttgctcgact 370

<210> 2127  
 <211> 381  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C4

<400> 2127

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 aaagcgtccg ggcctggtgg gtccttcgac atcaccaagt tgggcgcctc cggcaatggc 180  
 aagacagaca gcacgaaagc tgtgcaggat gcatgggcat cggcgtgccg gaggactgtg 240

aagcagacaa tctcaatac caagggcgaa ttccttttcc gacaactcaa cttcacacgg 300  
 ccttgcaaag gcgacgtgaa catccaagtt gattgcaatc tgctggcgac cacggaccta 360  
 agccagtaca acgaccatgg t 381

<210> 2128  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H8

<400> 2128

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 cttcatctcc agcaaggcgt cggagccggg gatctcctgc tgctcggtgc tggccggagt 180  
 cgtgcagacc gacccccgct gcctctgcat ggtactggac ggactgcca cgtccttcgg 240  
 catcgccatc aaccagacca gggcgctgga gctccccggc gtctgcaagg tcaaggcgcc 300  
 gccgctcagc cagtgcacag gcgtccctgc ggcacctgca ccgacgcctc ccgacgagcc 360  
 agcagcggca gctgaggaag aagccgacgc agctgcagat gcccttcag cagatggagc 420  
 ctcaagctcc ac 432

<210> 2129  
 <211> 158  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-A2

<400> 2129

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 cttgttcctc ctggtcctct tctgcatcgt gcatggtgag aaggaagagt caaagggcat 120  
 cgatgcgaaa gcgtccgggc ctggtgggtc cttccaca 158

<210> 2130  
 <211> 442  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-043-Q1-E1-A3

<400> 2130

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taaattcagt gttttgtttt ttttctggtg gcgtactgtc actgttgact ggccctacgga 180  
tctgagtttt tgtgtaattg tttggaagca attccattgt cgccgaaatg gcgcggtagt 240  
ttctctgact gctgctgcta aatactagga acttttagttt tcttcaagtc caaagggtca 300  
gagttgagag cacctgagat cgggcgatgc ttcatggcca cggccccca gaggtatttc 360  
gcaatagttg actctaaatt tctctctata tatcagtttt ttgtgtcaca ttatcaacat 420  
ttcatacctt aactttttta ng 442

<210> 2131  
<211> 321  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-A4

<400> 2131

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gccgtctgcc ctgtgactcg tcggctggac tgagcaggtg cgtttgcagt tgcagcctta 180  
ccatatagct tataactttg tggttaagtta gcatactgc atgctgtaac agacatggag 240  
gatatagtgg agctctgcag gataatagag tggtaatgcc cactcaggtg acctaagaca 300  
ttgcaagggc gacgtgacca t 321

<210> 2132  
<211> 306  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-A6

<400> 2132

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gccatggcgt tctgtggct cgagttctcg cagtcgttcc aggtgctggc aatcctcgcg 120  
 tccacgcgca cgcgcgcgt cgcgctcggc tacaggttct gggtcggcgc ggggctcccc 180  
 gccaggggag cgcgccacgt cgcgcgcggc tgccagctgg gcctcctcgg gtgcaagctc 240  
 gcgtgccatg tcggcgctct gtggatgcat cttgggtccc tcggcggggg ttgcagcggc 300  
 atgcgg 306

<210> 2133  
 <211> 324  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B1

<400> 2133

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 ggcaaaacac cttcgccggc gagagcatgg cgatggcgta ccgtgtcctg gaggtcaccc 120  
 tgggtgtcggc aaatgacctc aagaaagtgt cgctcttctc ccggactcgc atctacgccg 180  
 tggtttccat ctccgattc gacctcgca tcccttccca cagcacccaa gcagaccaca 240  
 gcaacggctg caaccctgc tggaacgccg tggtaactt ccccatcccg gctgccgctg 300  
 acaccgcggc cctcgcactc cacc 324

<210> 2134  
 <211> 205  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-G10

<400> 2134

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 ctcagagttt tccgttgccg tgaccatctt cggcgggcgt ggccatgccg ggacatgggg 120  
 aaaggcactt ggtgcagagg tctatgactg caacaacatg gtggagcagg agctgcctgg 180  
 aggcgggctc ctcgtgtacc agagc 205

<210> 2135  
 <211> 182

<212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-042-Q1-E1-G12  
 <400> 2135  
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 ccactacggc cagatcaaca tcacccgcac catcaagctc gccatgggcc gcggaaggt 120  
 ggacggcaag gagcggttcg gcttcaacgg cgtgtcgac gtcgaccccg agacccccgt 180  
 ca 182

<210> 2136  
 <211> 418  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-042-Q1-E1-G4  
 <400> 2136  
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 aagtcccccc aggcaagaac atcacggcca cctatggcaa ggactggctg gacgctaaag 180  
 cgacatggta tggcaagccg acgggtgccg gtcccgacga caacgggtgt ggctgcgggt 240  
 acaaggacgt gaacaagccc cccttcaata gcatggggcg atgcggcaac atccccatct 300  
 tcaaggatgg tctgggttgt gggctctgct tcgagatcaa gtgcgataag cctgtggagt 360  
 gctccggcaa gcccggtgtg gtgcacatca cggacatgaa ctatgagcct atcgcggc 418

<210> 2137  
 <211> 432  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-042-Q1-E1-G6  
 <400> 2137  
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 tatcagtatc aacagtgcag aatttcctta gagttgcaat aattatatcc ccaatagctc 120  
 aattgaagca atttaagcaa caaggacaat ggggagccgg acgtttccat aaccataata 180

acaagggttaa ccttgatatag taagaattga acctttggat ctaacaacaa acaacacatc 240  
 caccggatga ggaaggattt cacctttgag gccaatcctc acaccgcgga aggttcctcg 300  
 acgtccctcc cccgtccgcc gccaacgcca ccgagcctgg gcacatcgag gcctccaccg 360  
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 tcgcgcgcct ct 432

<210> 2138  
 <211> 210  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-042-Q1-E1-H10

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 tcctcttctg catcgtgcat ggtgagaagg aagagtcaaa gggcatcgat gcgaaagcgt 120  
 ccgggcctgg tgggtccttc gacatcacca agttggggcg ctcgggcaat ggcaagacag 180  
 acagcacgaa ggctgtgcan gaggcattgt 210

<210> 2139  
 <211> 194  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H12

<400> 2139  
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 ggagtacggg gagttcttca tgagctggta ctgcgagatg ctctggagc acggcgagcg 120  
 catcctgtcg gcggcgacgg gcgtgttcac ggggtcccc ggctgaaga tctcggtgaa 180  
 ggtggccggg atcc 194

<210> 2140  
 <211> 307  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H4

<400> 2140

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atctctaacc acctccctga agtttgatgg tgctatcaat gtggatgtca ccgagttcca 120  
gaccaacctt gttccatacc cacgtataca tttcatgctt tctcatatg cccctgtaat 180  
ctctgctgag aaggcttacc atgagcagct ctctgttctt gaaatcacca atgccgtctt 240  
tgagccctca agcatgatgg ccaagtgtga cccaaggcat gggaagtaca tggcttgctg 300  
cttgatg 307

<210> 2141

<211> 202

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D9

<400> 2141

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cagtcagttt ggtgtaggca ccatcagagc cctgtgaaaa atagaagcac tcacgcatgg 120  
tagcagcttg ttattgttgt tagctgctga cgctttgagg catgtcaaca agtagagatg 180  
gattgcaaat cctaataaat gt 202

<210> 2142

<211> 366

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-E3

<400> 2142

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ctaccaacca accctagaaa gctagacacc gtacccatgg ctcgcgctag cgtcgtcttt 120  
gtcattgctg ctctcctctt cgtcgccatg gtcgtagcac cgatggccga ggcaaagtct 180  
gccgatgcc ctgtggctga cgcgccggcc gatggaccta gcgggcgggc tgctgcacct 240  
ggcccccagg gtgtcgaagg cctgtcaggc aatgaggatg acgatgatga ctccatgatt 300



tgaggccaca catgtctgca cggttaaatt tggaacaaga catggaagaa caatgatagc 360  
aatgtc 366

<210> 2143  
<211> 414  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-E6

<400> 2143

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gtgctagccc tcgcgctagt ggcgccacc gcccacagg tagcggaggc aaagaagaag 180  
agagcggcgg agagcggcga ggcgggcgag gcaagaaga tccaggacga cttctgctcg 240  
acgctgtgcg agggcaagaa ggggacggac ctggtcgtgt gcaaggagtc ctgcgcgctc 300  
tcccagcagt ccaacctggt gctgtacggc aggatccagt gcaagggcaa gtgcaccgag 360  
cagaagggca tcacggcgcc ggccatgaag gtctgccagg aggagtgcga caag 414

<210> 2144  
<211> 211  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-E9

<400> 2144

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ctggacgtgc acgtcggcca ctgcctctcc gtgctggctg acgccgacca ggcgcccggc 120  
gactactaca tgggtggctc cacgcggttc atccacgacg ccaagtccgc ctccgccgtc 180  
atccgctacg ccggctccag cggcgccccg c 211

<210> 2145  
<211> 425  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-F2

<400> 2145

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atccatagcc tcgttgaggg aggcgccaac atccagggtcc tcctcgacga cgcgcgcgc 180  
accctcggct ccggacccgg cctcggggcgt atcggcgggg caagctttgg ggattacttc 240  
gtcggcccag gcctcgaaca actcatcgag cagctcgccg agaacgaccc caaccgctat 300  
ggcacgccc cggctgcca atcgccctc tcctcgctcc ccgacgtcct cgtgactcat 360  
gccatggtcg cagctgcgga gggcgctgag tgcgccgtct gcaaggaggg attctcgct 420  
ggaga 425

<210> 2146

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C1

<400> 2146

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gcggccagtg cgcggaccgt gggcgacacc gtgcaggacg cgtgcagcaa gaccagttc 180  
cccaagatct gcgtggacag cctcgccgcc aagccggaga gccagaaggc gacgccgcgc 240  
aagctggcgg agctgttcgt gaacatcgcg gccgagaaag gatgcgggat ggccaccttc 300  
gtgcaccgca agtacagcga caatgaggac agcgacatat tcaagtgcta cgacagctgc 360  
tccgacgacg tgg 373

<210> 2147

<211> 216

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C10

<400> 2147

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 cgcgctcacc aactgaccgg accggccggc gttccccgtc gactgtgttc gatcgctaga 180  
 cgggggtggca cgctgcgatg actacctgta tggcga 216

<210> 2148  
 <211> 223  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-042-Q1-E1-C11  
 <400> 2148

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 tggctcccgga ggaacacccc gtctctctca ctgaggcgcc cctgaacca aaggctaacc 120  
 gtgagaagat gaccagatc atgttcgaga cttcaacac ccccgctatg tacgtcgcca 180  
 tccaggccgt cctgtctctg tatgccagtg gtcgtaccac agg 223

<210> 2149  
 <211> 148  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-042-Q1-E1-D2  
 <400> 2149

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 aaggagaagc agcctctgct cagcgagaac tgcaggaggt cctggcacc tctctcttcc 120  
 tgaacgcaaa gcacgcccgc cggtcgtc 148

<210> 2150  
 <211> 397  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-042-Q1-E1-A3  
 <400> 2150

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aagtcggggc tcgtcatcca gaactgccgc ctgggtgccg accagaagct cgtccccgac 180  
 cgcttcaaga tccccata cctggggcga ccctggaagg agttctcgcg cctcgtcata 240  
 atggagagca ccatacgcca ctcatcaag cccgaaggct acatgccctg gaacggcgac 300  
 ttcggcata atacgtcta ctacgccgag ttcaacaacc gcggccccgg cgccggcacc 360  
 agcaagaggg tcacctggcc tgggttccac gtcacg 397

<210> 2151  
 <211> 354  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-042-Q1-E1-B4  
 <400> 2151

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 ccgccttcac gcctccctca ccaaataatag tcgcgccctt taccgacatt cacagggggg 120  
 acaggaaatc aaccgtcatg tcctcgatct cagcgacgac cttcacggtc atcttatacg 180  
 tcatcatctg tgccacagcg ggcacagccg tcaacttgta cctcctcgac taagtcata 240  
 atagccccct cgactgcgac acctgccacg ccccgttctc gaccaatgtc atcgaatata 300  
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<210> 2152  
 <211> 373  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-042-Q1-E1-B7  
 <400> 2152

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 ggcgtcgcg acgcgaccca gcccctcgtg cagcaggccg ccgtcgcgct caccaactga 180  
 ccggaccggc cggcgttccc cgtcgactgt gttcgatcgc tagacggggg ggcacgctgc 240  
 gatgactacc tgtatggcga gtccctatac ttactcatac atgagctgcg ccgccgtgtc 300  
 gtcggtgcgt gcaccgcgca gtagtgtgcg tacagcggag agctgcgacg gctagcgagg 360

tacggtggtg ggt

373

<210> 2153

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-G6

<400> 2153

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cgaggcgctcg tgcccggcaa cctccgcggc cgtggcggcg gcgagggccg atgacgccct 180

gcgccagcgc ccgcgggggc tcgtgcaggt ccgggagcgg gatcagggcc cgctgtcgac 240

ggggcaccag cacctgcacc accatcacca ccagctgcgg cggtcggcgg cgttcccacc 300

ccgccgcccg gggccggggc gccgccctcc tcagcgctgc gaaagcgacc tcaacatcag 360

ggagcaccgc tcctgcagcg aggtggccgg cggcaccgcg gcgggctgcg ccgctgtgtg 420

ctgctg 426

<210> 2154

<211> 297

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-G7

<400> 2154

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tggaggggat ttttaacattc attctttggt gtagagccat tcgtcttatt attacatcat 180

ttaattcatt ctttgtaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240

aaaagaaaaa aaaaaaaaaa aaataaaaga aaaaaaaagg ggggcagccc aagaggt 297

<210> 2155

<211> 336

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H10

<400> 2155

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ctggtgaagg aaccgacca gattgccatc cggtagctga agaacgactt catcaacgac 120  
ctggcaacca tgctcccgat accgcaaagt atcaaccggg ttgttaaacc aactgtgaat 180  
acatcctccg gcaatcacia caacaacaac agctctcca agattgtgcc gattcaattc 240  
ataccaagaa tccaacccaa aataaccctt aactccaaaa ttgttcaagg caattgaatt 300  
ggtaacaaaa attgcctggg cggggggcggc ttaaaa 336

<210> 2156

<211> 376

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H11

<400> 2156

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gtttggttgg aagtaaaaat aataaactgg attgtaatac caactataaa taaaatcaca 180  
gaaaaatcac aacaccaaca aaaaaactct caatgatcgt gctgatcaaa tacataccaa 240  
gagtcaatct aataatatcc ttgaactcaa agatagtcgg ggcaacctcc agtggtgacc 300  
agataagcct gcgcgagggc ggagtacaac ctgcttctct acacgctggc aatccatgtc 360  
ctcggtgctc tctgaa 376

<210> 2157

<211> 360

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H12

<400> 2157

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tggaaaaccg gcaaaactgc ggagttcctc gtggtggaca aaatactttg tccaaactgg 180  
 cttaacagag aacgaacggc cactgaagaa atttgaagag gctacatccc agaacatata 240  
 ccaaccagat tgtcagatct tccacttaag ttcgccaagg tgatgcgcat ccagaacacc 300  
 ttgggttggt gtcagttgtc acatcagttc tgtaagcagc acctttgctt acccctgttg 360

<210> 2158

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H4

<400> 2158

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 agcaggcgga ggcgatcacc tccgccatca cggaggtcct caacgacagc ctcgagagca 120  
 tctccgagtc cttcgtctcc aaggccgaga tgcagaagag tgagatgctg caggagtcca 180  
 atatctccaa gttcaagtcc caagtgcaga gtcgcagga aaaccatttc tctttactac 240  
 agcgggagac tgagaaactt cgcggagata ttgataagat gaggagtga ctgaagtatg 300  
 agatcgacaa ggtcaccgca ggacagcgat tggatctgaa tcttgaaaga gggcgcatatc 360  
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<210> 2159

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H7

<400> 2159

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 tcggcctttt gtcaggcat ccacaggggg gattgggaaa acatttgcg gcatccggcg 120  
 gcaataatgg catcggttcc ggctccggcg acgacgactg ccgccctaata catatgacta 180  
 tgcgtcctcc tctcctgtgc cgcagcctga gtacctaaag ctccccgact acgtcatcca 240  
 gggcctcgtg tactgcgaca cctgccgcgc cgggttcgtg accaacgtca ccgactagat 300  
 cgcgggcgcc agcgtgatgc tggagtgcg gcacttcggc accggcaagc tcgagcgagc 360

catcgacggc gtcaccgacg cgaccggcac ctacac

396

<210> 2160

<211> 390

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H8

<400> 2160

gagacacttc atcgctcca tcccatcccg ccgcccggc ctctacggtc gctaataagc 60

cgccgcatcc accgatggag atgaagaaga tcgctgcgc cgtcctcgtc gccgcctcgg 120

ccaccgtggc gctggacgcg gagggccgg ctccgtctcc caccagcggc tctcccgcg 180

tcgcacccgc catcgtcagg gccgcccgtg cctccttctt cgcgtactac attcactgag 240

ccgcccggacg atgagcctga tccggaggga agagaccaat gtgggggggag agacttggct 300

gcgctgcgct gctctgctgc tcacgcgcgcat tcgcgatgcg tgggcgtgct ctgattgggc 360

acagctgtgg cagtggcaca ccttcggcct 390

<210> 2161

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-E5

<400> 2161

caggacctgg actcgcgga tcgacacacg cctccacaat gcgtcgaacg acggggtgtt 60

ggacgccatg gcggtgttgc ggatgcaggt ggacgcgttc aacaagcgca ccgaggcggc 120

gagggcgcac gtcaaggagg ccgccgtgac ggcgtcccc aaggcgcgga cgggtgctgga 180

cctgtgcaac aacctgtacc tggacgtgga ggacaacctg ggagcctgcc gccgcgcat 240

cggcttcaag gacgccgtca ccatccgcgc caccatgggc atggcgcgcg aggacatgca 300

gaactgcgac gagcagttca ggcagatcgg cgagaagaac cccatggagc agttcgacgc 360

gtcgtcgtc gagatgtccg agaactgccg ctcgctctcc aacatgatct gatcg 415

<210> 2162

<211> 139

<212> DNA



<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-E6

<400> 2162

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caagaagcgc accgaggcgg cgagggcgca cgtcaaggag gccgcggtga ccgcctcccg 120

gagggcgtga accgtgctg 139

<210> 2163

<211> 329

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-F1

<400> 2163

agtcggacta ccgaggcccg aggaagagac gaagcgggag agagagtgc atggctgcgc 60

gcattccgat gcgtgggcat gtttttgatt cgacacacct tttgtcctct ttttctttgt 120

tccctctttc tccttaattt aacgaattga tgcattgccgc tgatgttctt ccccttgaga 180

gagggattaa cacttgatc atcgcttgcc atttgtttga atccattcaa caattcgatt 240

tataaaaaaa gaaataaaaa aaaacaaagt aaagcaaaag tgaaaacact tcaacaagat 300

gaattctcga acggtccacc gaaggggtg 329

<210> 2164

<211> 306

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-F12

<400> 2164

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gaacaagcca accgaccccg tccccaaggc aatccgtcgc cgacgtacca ccgccaccgc 120

aggagcgaga tggagatgaa gaggatcctc ttcgccgtcc tcgtcgtcat cgccgcctcg 180

gccaccgcag tgctggcctc caccgaggcc gccgccgcgg gcgcccacac tgccctccgag 240

tcgtccgccg aggtcctgc tggcgtggc gctggcgctg ccgccggcgc tgtegtgctg 300

gggccc

306

<210> 2165  
<211> 180  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-041-Q1-E1-G11  
  
<400> 2165

tgcgcgacaca gaacgtcaac ccgtacgcag acgcagacgc tgacaccgcc cacgccaacg 60  
ctaacgceaa cgccaacgcc agcgccagcc ttccggagcc gccactcctc tacgacgtcg 120  
gaaacccgctc cgcgttgacac tccagcatatc cgtcactgtc acaaacagcc tcgactctc 180

<210> 2166  
<211> 386  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-041-Q1-E1-G12  
  
<400> 2166

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cggcgggcgtt gttcaaaaac tgcctcatca tcacccggcg gcccatggac aaccaccaga 120  
actcgggtgac ggcgcacggg cgcaccgacc ccaacatgaa gtccggggctc gtcacatcaaga 180  
actgccgcct ggtgcccgcac aagaagctgt tcccgaccg cttcaagatc ccctcgtacc 240  
tgngccgccc ctggaaggag ttctcgcgcc tcgtcatcat ggagagcacc atcgccgact 300  
tcgtcaagcc agaagggtac atgccctgga acggcgactt cgccctcaag acgctctact 360  
acgccgagta caacaaccgc gggccc 386

<210> 2167  
<211> 281  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-041-Q1-E1-G2  
  
<400> 2167

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 gggggggggg gggggggggg gggggggggg gggggggggg gggggggggg gggggggggg 120  
 gggggggggg gggggggggg gggggggggg gggggggggg gggggggggg gggggggggg 180  
 gggggggggg gggggggggg gggggggggg gggggggggg gggggggggg gggggggggg 240  
 gggggggggg gggggggggg ggggggnggg gggggggggg g 281

<210> 2168  
 <211> 267  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-D1

<400> 2168

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 gcgacaacaa gaccggcgag atgggcggcc tgaacatcga cgagctgac gagaaggccg 120  
 acgggttcgc gggggtgttc ccggagcaca agtacgagat cgtgaagcgg ctgcaggacc 180  
 ggaagcacat ctgcggcatg accggggacg gcgtgaacga cgcgccggcg ctgaagaagg 240  
 cggacatcgg catcgcggtg gacgacg 267

<210> 2169  
 <211> 333  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-D10

<400> 2169

gtcgtattag ataccggcat ggagctctgg atgtggaaca ttagcgaatg gcagcgttcc 60  
 tatcaatgga caatcttccc gaacacactg ttgctggact tcgtggcgaa tgcccaaate 120  
 cgcaggatct cactgcggag tagcaggttc ttcgacatga acatcttctc gagcaagaac 180  
 gtggtgatgt acaatgtgac catcaaggcc cccggaaaaa gcccacacac ggccagcacc 240  
 aacatcagcg actcgatcaa cgtgacgac agtggcacca tcatcaccct cggccacgac 300  
 tgcttctcca tcggcccccg gaacaagacc atc 333

<210> 2170

<211> 416  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-B5

<400> 2170

tcgtttgatc aatacaactc tctaaagtga gtcattatcat catactatgt agttcctaata 60  
attacttggg actcatcaca ggaagaaaaa catgaaattg ttgaacgtta caaggccaaa 120  
ctcagggteta ttgattgtaa gcactttgac ttcgaaaagg gcacttgtcc atttgaagc 180  
agctgtttttt acaagcatgc ctactatgat ggccgtttgg aagacgcttt attgaatcat 240  
catgatgccg acgatgcaag cgcagctatt gccaaactta tgaagttgtc gtacatactg 300  
actcggttac atgtgtaatg aaactcaaac gtatccttga tcaaactatgc tgacttcgat 360  
tgagattctt tgaccgagca tgcaaactta gatttcgcat tgtaatggat aatatt 416

<210> 2171  
<211> 401  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-B9

<400> 2171

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agccatatacg aaagtctca acatcgcttc gtgcagcctg catcgatcga cgagggctgc 120  
acgaacgatg gggtcgcct ccgcctcagt gatgacgacc agcctgctgg cgctggcgct 180  
ggcagcgctg gctttcgtct ccagggccgc ggcgagggc aacggctgtt ccagcgatgat 240  
gatgaccctg gcccgtgca tggacttcat ctccagcaag gcgtcggagc cggggatctc 300  
ctgctgctcg gtgctggctg gagtcgtgca gaccgacccc cgctgcctct gcatggctcct 360  
ggacggcacc gccacgtcct tcggcatcgc catcaaccag a 401

<210> 2172  
<211> 412  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-C11

<400> 2172

gcgggtcgac ccaagcctct acacagattc gtaggataag ggctccccta atttaagccc 60  
tacattgaaa attgggttttg gtcacatgc gtgtgatgac aaaaattgtg gcaatgcaga 120  
ttatgttgat gatcttgatg acatttccca agaagatacc tgtggtagtt ctgatcctgg 180  
caatggaatt gcggaagata aatttgaggt caatggatct gctcaaataa agcgtccaga 240  
atttcaaaag ggtgtcttac gtacaaactg tatacattgt ttggatcgca caaatgttgc 300  
tcaatatgcc tatggcctag ctgctttagg acaccagtta catgcacttg gttctgtaga 360  
atcgccagaa gttcatctag actctccttt gtctcgacat ttgatgcatt tt 412

<210> 2173

<211> 365

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-C3

<400> 2173

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cagtacacag tgattgatgc aaactttatc tctaagatcc caatgttgtc tgagaacaaa 120  
caacactgag agagggtgct ccaaacgtct aattcagcac attaccaata tataaaagta 180  
gttccgttgg ctttgcgata tcatcattta gcaaccttta agatgatacc atagatatta 240  
tatggattcc taaggttgga aatttgtgtc gtccgagtca cctagaatac ttgcttcttc 300  
ctgtctgaca atgaacttga ttttgtatcg atctgacata tatatgcctg accaaatgtc 360  
attaa 365

<210> 2174

<211> 333

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-B1

<400> 2174

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atcaagtgca atagcccggg gaattgctcg gggaagccct tgggtgtgca catcacggac 120

atgagctatg agccaaatcg cggggtacca ctttcaattt accaggcacg gcgttcggcg 180  
ccatggacaa gaagggcgat gacgagatgc tgcgcatagc gggcatcatc gacatgcagt 240  
tccgaagggg taagtgaag tacgactcca aggtcacctt ccaccttgaa aaaggggtgcg 300  
gccccagata cctggcactg ctgggtcaagt acg 333

<210> 2175  
<211> 215  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-040-Q1-E1-H10  
  
<400> 2175

ggtcgaccct ctaaattgag tcatattacg ccatactccc cacgctgctc tccgtcaccg 60  
acaaaaaact cggcttcttc aataacacaa gggccaacaa cgggcaaata tacttcggcg 120  
ctccggggagc cccctgcgtg gccaaagctcg tcaaggctcg cgcagcgcg cgtactctg 180  
tgtccatcat ggagatcagc gagcccattt tgccg 215

<210> 2176  
<211> 180  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-040-Q1-E1-H11  
  
<400> 2176

gaagagagaa acgcgagcaa ccagcgatcg ccccatggcc gccatggctc gttccgtctc 60  
cctcgtcgtg gcgcccctgc tctcctctc nctcctcgtc tccgccgcg ccagcgcgcg 120  
gaccgtgggc gacaccgtgc aggacgcgtg cagcaagacc cagttcccca agatctgcgt 180

<210> 2177  
<211> 407  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-040-Q1-E1-H2  
  
<400> 2177

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tgatggcaaa tttgaacatg gctacataat aactgttatt atgggatcaa aatccactaa 120  
 agcaatcctc tataactgca ctgaagaacc tgctctacca acttcggagc tagctgttgc 180  
 aagtaacaac aatgatttga aggggtggacg tcgccgaaga cgacgtaaga agaagctaag 240  
 tacaacagac cccaggcacc ccaaaccaaa caggagtggc tataatttct tcttccagga 300  
 tcaacataga atgcttaagc cacaatgtcc tggacaagac agattgatca gtaaaatgat 360  
 tggatgaacga tggaacaatc taagtcctga agataaagct gtatatc 407

<210> 2178  
 <211> 365  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-A11

<400> 2178

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 ttggtgcggc gccggccgcc gcgaacgcgc ccggcggggc gttcagcaac tgggtggcga 120  
 tgaaccagca gagctacgcy ctgtacgcgc agaagtcctg cggggacggg ggcaaggagc 180  
 ccctggacaa gaagctgtcg gaggcggaga agaagaatgt cacgtacgtg gtggacccca 240  
 gcggcaaggg cgactacacc aacatcaccg cggcgctgga ggatatcccg gtgagcaaca 300  
 ccaagcgcgt gatcctggat ctcaagcccc gcgctcagtt ccgcgagaag ctgttcctga 360  
 acatc 365

<210> 2179  
 <211> 284  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-A3

<400> 2179

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 tacgtacgcy gcctctagta aacgtggccc tggacgcaga agcgccggct ccgtatctat 120  
 cagcggctcc ttggcggtcg caccctacag cgtccgggac gccatggctc ccattctctg 180  
 gtactccatt cactgaaccc ccggacaatg atccggctcg gtcggaatac acaccgcagg 240

gggatatagc ttgcagcgct gcactgcgct gctgctctcg cgca

284

<210> 2180  
<211> 388  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-041-Q1-E1-A5

<400> 2180

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gaagagccgc agcatggcat catcgccgc gctcttggtg ctagccctcg cgctagtggc 120  
ggccaccgcc ccacaggtag cggaggcaaa gaagaagaga gcggcggaga gcggcgaggc 180  
ggcggaggcg aagaagatcc aggacgactt ctgctcgacg ctgtgcgagg gcaagaaggg 240  
gacggacctg gtcgtgtgca aggagtcctg cgcgctctcc cagcagcca acctggtgct 300  
gtacggcagg atccagtgcaggaggcaagtgc caccgagcag aagggcacatca cngcgccggc 360  
catgaaggtc tgccangagg agtgcgac 388

<210> 2181  
<211> 280  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-A6

<400> 2181

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atcatcggcc gcgctcttgg tgctagccct cgcgctagtgc gcaggcagcg cccacaggt 120  
agcggcggca aagaagaaga gagcggcgga gagcggcgag gcggcggagg cgaagaagat 180  
ctaggacgac ttctgctcga cgctgtgcga gggcaataag gggacggacc tggctggtg 240  
caaggagtcc tgcacgctct ctcagcagtc gaagctggtg 280

<210> 2182  
<211> 74  
<212> DNA  
<213> Zea mays



<223> Clone ID: LIB148-040-Q1-E1-E9

<400> 2182

ctaaagtgag tcgtactaca cgcattgtcc agccggccat cacctggctt ctctgtctca 60

ttgtgaccac cgat 74

<210> 2183

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-F1

<400> 2183

gttggtcgat acaatactct acagtgagtc gtactactgc ttgacggcg agaactgga 60

gagtgtcct cctcctatga agaaggacta caagctggct aatcttctct gctgggagga 120

ggaagcggat gccatggagg agaaggcggg agtgcttgat gagtaagacg ggcttctggg 180

gtcgatttgc ttctgagttg tttattttat atcgctgcaa tttcgtggtt gtcgtttggt 240

tattctgtga agcagccaag ccaggctatt gttatgaaaa ttgtcgtct gtaagcatgt 300

gaacttccga tgttgccaca tgctggatca gtctgaataa gtaagtatgc agctctaggt 360

ggtcagctgc gtctaacaca atgagcatga acg 393

<210> 2184

<211> 208

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-F10

<400> 2184

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tccctccgac cgccactcgt ggcacgactg cctcgccgag gccgacgcct gcttctccga 120

cctcgaggag cgccaggtcg tgcgcgtcca gggcaccgat cgggcccgcc gaaccatcgt 180

ccgtgtcgtc ggcaagttct tcccggct 208

<210> 2185

<211> 370

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-F2

<400> 2185

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ggccgccagc aggttcagcc gttcctgttc ttgctaaaac gagagaagga tggcagtgtc 120

tcagggagct gtctatttct tgtttctcct cgtcgcagca gaggtgggaa ccatcgatgc 180

caaaatggga gtagccatgc ccatcgatgc cttgataatg gagaaagcga aacagcagga 240

gacggagaag aaggaggaga aaagcacgga gaaggaagag agtcaatgct tatcgccgag 300

tctccagttc gagggcttct gcttcaacag cgacagatgc gccgatgtgt gcatgaagga 360

gagctttccc 370

<210> 2186

<211> 364

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-F3

<400> 2186

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acttcgtgac gaacgccag atccgaggca tcacgtgtct gaacagcaag ttcttccaca 120

tgaacatctt cgggagcaag aacgtggtga tcgacaaggt gacgatcaag gccccgggca 180

acagcccaaa cacggacggc atccacatcg gcgactcgag caacgtgacc atcagcggca 240

ccaccatcgc cgtcggcgac gactgcttct ccatcgggcc cgggagcaag accatccgcg 300

tgaagggcgt caagtgcggc cggggccacg gcacagcgt cggcagcctg gggcggtaca 360

agga 364

<210> 2187

<211> 390

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-F4

<400> 2187

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ctctacggtg cttctgctcg ccggcccaaa atcgctcat cgaccacgcc cccttccagg 120  
ctcccgcttc catgggtctc ctctcaaaca ggattgggag ggagagcctc aaggcggggg 180  
atcatatcta ctctggagg gcggcgtggg tctacgcga tcacggaata tatgtgggcg 240  
atgataaggt gatccatttc acaagaggaa gaggacagga ggtcggaaca ggaactgtcg 300  
tcgatattat tcttgtgagt tccaccccaa aacgaagcaa cacgccttgc ccggtgtgca 360  
ccgacgaaac cagcgacagc agcacagaga 390

<210> 2188  
<211> 350  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-F5

<400> 2188

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accgccgctt ccgcgcggcg ctgttcttgg ccatgggcct gtcgggcgtc gtcccggcgc 120  
tgcacgcgct gtggctcaac tggggccacg ccgcctgcta cctggcgctc ggctcagagg 180  
tcgccatggg tctcgcttac gccacgggcg catggttcta cgtcagccgc gtgccggaga 240  
agtggaggcc cggggtgttc gacgtcgtgg gccacagcca ccagatcttc cacgtgctcg 300  
tgctcgtcgg cgccgtcacg cactacgtcg ccgtcgccgt gtcacccac 350

<210> 2189  
<211> 397  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-G1

<400> 2189

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aaaactctca ccgccgccat ccgagagaac aagccaaccg acccgtccc caaggcaatc 120  
cgtcgccgac gtaccaccgc caccgcagga gcgagatgga gatgaagagg atcctcttcg 180  
ccgtcctcgt cgtcatcgcc gcctcggcca ccgcagtgtt ggctccacc gaggccgccg 240

ccgcggggcgc cccaactgcc tccgagtcgt ccgcgcgaggc tcccgcctggc gctggcgctg 300  
gcgctgccgc tggcgccgcc gccgcggggc cctccgccag cagcggcgcg cccgccctcg 360  
ccgccgcgcc cgcgcgctc ctcttctccc tctctgc 397

<210> 2190  
<211> 209  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-G10

<400> 2190

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acgggcgata gcggccagct tcatcctggg cgtcgccctc tgcgccgtcg ccatgaagat 180  
cagcctcaac tcgggcttcc tcccgtcgc 209

<210> 2191  
<211> 376  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-G2

<400> 2191

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ggcggcgaac ggcatgaacg tggctctgca ccggcaggtc tcgggggggt cgatgaagca 180  
gaacgcggag ctccggcgcc aggcgtcgct cgagtccccg cggacggggc gggccaccag 240  
ccggttcctg ttcgggcggc agtcgtccat ggacccgaac cggacgcgcg gccggagcca 300  
gagccccgtg cgcgcgccg acgacctggg cgtgccggac aacctggacg cgaccatgca 360  
gctgctcttc ttcgcg 376

<210> 2192  
<211> 411  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-040-Q1-E1-G4

<400> 2192

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 cggccgaggc cccggcagag tcaccgaagg aaggcagtgc tgccaaggca cctgagtctg 180  
 ccaagagaac tgctgcccc gctgaagcac ccgaagccgc atccaccccc gtcgcccgcg 240  
 ctgccccatc gccgtcgtct aggaagtctg gtccagctac cgcgccagcc accgcctcta 300  
 cacccttctt ttccacggac gaagagttga gcccttcccc gccagcatcc accgcccgcg 360  
 cgtcncctgc ggctgangga acggctgctg atgactccgc cgggtgctgct g 411

<210> 2193  
 <211> 363  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-G5

<400> 2193

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 tggcgcagcg agcgggtggc acgatgacga ctaataagcc cctcctcctc ctgcgcctgg 120  
 cgtccgcgct ccttggtgcg gcgccggccg ccgcgaacgc gccggcgggg gcgttcagca 180  
 actgggtggc gatgaaccag cagagctacg cgctgtacgc gcagaagtcc gtcggggacg 240  
 ggggcaagga gcccttgac aagaagctgt cggaggcgga gaagaagaag gtcacgtacg 300  
 tgggtggacc cagcggcaag ggcgactaca ccaacatcac cgcggcgctg gaggatatcc 360  
 cgg 363

<210> 2194  
 <211> 423  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-G6

<400> 2194

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tggcctccag gtcctccatc ctacttgcaa cggcgatgct ggttgcgctg tttgcggttg 120  
 gtttgtgcac cacccegtc accttcagg ttggcaagg atccaagcct ggccacctga 180  
 tcctcaccac caatgttgca accatatctg acgtggagat caaagagcac gggggcgatg 240  
 acttctcctt tacgctcaag gagggccga ccggcacctg gacgctcgac accaaggccc 300  
 cgctcaagta cccctttgc atccgcttg ctgtcaagtc cgggtggctac cgcacgccc 360  
 acgacgtcat ccccgccgat ttcaaggccg gcaccaccta caagaccaca ctacgcatct 420  
 aat 423

<210> 2195  
 <211> 393  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-G7

<400> 2195

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 ttcatcagca atatcgagc gaaggcggcg gccgtggccg cgctgctgct ggtcgcagcg 120  
 gtgtcgctg ccgcgcgcgc ggcgggggtg gcgggtggcg gaggggcgcc gtcggtgccg 180  
 gcgggtccgc tggacatcgc gcagctgggc gccaaaggcg acggcaagtc ggacagcacc 240  
 ccgatgatcc tcaaggcgtg gaagaacgcg tcgcaggcga cgggggtaca gaagatcgtc 300  
 atcccgcggg gcaactacct gacgggcggg ctggagctga agggcccctg caagtccctcc 360  
 atcatcatcc gtctcgacgg caacctgctc ggc 393

<210> 2196  
 <211> 371  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-E8

<400> 2196

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 ggaacgccag agaccggcg gcggcgacga tggctccgag cagctcatcg gggcgacgt 120  
 gcctgtgcct cgctctcgcc gcggccacgc tggcgctggc ccacggggcg caaggaggag 180

gaccatcggc atcggcggcg gacctggaca aggtcacggc cgagaccttc ctcgacatcg 240  
agatcgacgg caagcctgca ggccggatcg tgctgggact gtttggggac accgttccta 300  
aaacagcaga gaacttcga gcactttgca caggggagat aggaattggc aagtcgggca 360  
agcctctatg g 371

<210> 2197  
<211> 206  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-040-Q1-E1-C9

<400> 2197

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cccggagttg gtggcccaaa ggatngaggt cccggtgccg ctgccgacgc gggagcgcgg 120  
catgacgctg gccgagcagc tcgccgcgtc gtgcaacctc cgcgacctac tcaagctccg 180  
ggacgacggc gtcagtggca gtgaag 206

<210> 2198  
<211> 207  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-D10

<400> 2198

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gcaaagaaga aaagagcggc ggagagcggc gaagcggcgg aggcgaagaa gatccagaac 120  
gacttctgct cgacgctgtg cgagggcaaa aaggggacgg acctggtcgt gtgcaaggag 180  
tcttgcgcgc tctcccagca gtccaac 207

<210> 2199  
<211> 200  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-D11

<400> 2199

tctatatattga ctctcatatc accccgcctt cagcctccc tcaccaaata aggtcccgcc 60  
cttttccgac attcacaggg gggacaggaa atcagcggcc atggcctcga ttccggcgac 120  
gaccttcgcc gttatcttat ccgtctctt ctgtgccgcg gctggcaccg ccgtcgacaa 180  
cgacctcccc gactacgtca 200

<210> 2200

<211> 216

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-D12

<400> 2200

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cggtcttctc cccttccctt gggcgggcggc ttctgcccgg cgggcctcgg cgaagtctc 120  
ggaaaatttc aacaaaactt cgtgccccaa cgccgaaaaa atcaccttgg gcgtcgtcaa 180  
aaaccggttc aaggcggacc ccggcaccgc cgccgg 216

<210> 2201

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-D7

<400> 2201

gactcgcagg acgacacaag cctctacact gactcctatt atgttcttca gcacgggcta 60  
gctagctccc tccctcccag ccattggcgac gccggacaac aaggggcacg ggcatccgct 120  
gcccaagttt ggggagtggg acgtgaagaa tccggccacg tccgagggct tcaccgtcat 180  
attccagaag gcccgcgacg acaagaagac caccaccggc cctggggctg ggaacgcgcg 240  
cgcaggcatt ccgccggcct tcaggaacgg cggcgggcgac ggcgggtaca ggccccgactt 300  
cggcgacggc aaccagtaca cgccgccccaa acggaagaag tgggccttct gtggctgctg 360  
aaaccaagct cgctgtgctg ctgtgct 387

<210> 2202



<211> 202  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-040-Q1-E1-E10  
  
 <400> 2202  
  
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 gatgtcacca cctacaacac cctgctgaac gcttgggtgc ttgccggtga tctggaaagt 120  
 gcccccaagg tgtttgatga aatggctggg gaggggaccg accggaactc ggtctcgtac 180  
 aatgtcatga tcaaggggta cg 202

<210> 2203  
 <211> 209  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-040-Q1-E1-E11  
  
 <400> 2203  
  
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 gtcaccgtgt tctccaccg gtacaagaac ccgcggcccg ccaccggcgg ctgctgcccc 120  
 aggaacttga ggttgctctc gaacttggtc tccggcaggt ccgtgtcgat ccagttgtcc 180  
 ctgagggtacc cggcgctcca cagcgggtc 209

<210> 2204  
 <211> 212  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-040-Q1-E1-E12  
  
 <400> 2204  
  
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 tattgcttgt agacaagaag atcggcctag aactgtgaaa gaaatatgtt cagttgctaa 120  
 tggggccaca aagaaagaaa ttggcagagc aaaagaattt atagtgaaac aactggaagt 180  
 tgagatgggg caatctatgg agatgggaac ca 212

<210> 2205

<211> 368  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-040-Q1-E1-E2  
  
 <400> 2205  
  
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 gagaagactt tccgcggagg cggaggcgga ggctacggcg ggttggaggc cggtggcgga 120  
 ggcggcgggcg ggcgctactc cccccgagc gaggcagcgc catccacgcc tgccgctggg 180  
 gagacgacga ccccttcgtc aggcggcggt tactccaccc ctacgcaggc agcgcctacc 240  
 acgcctgccg ctgaggagac gacgacgact ccttcgtcag gcggcggggg ttacggcggt 300  
 gcaaccggca aggcttcctc aagcggcggc gggctggacc ccgacggcga ccagagggtt 360  
 gggctgaa 368

<210> 2206  
 <211> 412  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-040-Q1-E1-C8  
  
 <400> 2206  
  
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 agagaagtag ccacaagcat gtctggcatc atcgacaaga tccaggagac gctccacatc 120  
 gggggcgacc acaaggagga gcacgagcac aagaagggcg aggagcacca caagaagggc 180  
 gaggagcacc acaagaagga cgacggggag cacaaggagg gcatcgtgga gaagatcaag 240  
 gacaagatca ccggcgagca cggcgacaag tccggcgacc acaaggacaa agaccataag 300  
 gagaagaaag ataagaagaa gaagaaagag aagaagcacg gcgagggcca tgaccatggt 360  
 gatggtgacg gcggccacag cagcagcagc agcgacagcg actgatctcg cc 412

<210> 2207  
 <211> 421  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-040-Q1-E1-E6

<400> 2207

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aggatcatgc cattacagaa gaagccgagt ggaccctcac cgacgcta caagaagggc 120  
ggaggtgaag gaaggaagac tccaaatggt aaaacaggaa ccaagaagta agcaatccag 180  
atgaaacttg gttttgctgt gaccaacttc accttggtta gggacagata aacatgttga 240  
tactatcggg tgatacattg atatttgcca cacgaatacg tcagtcctct taaggaggga 300  
ggtcgctaga tcttcgggca tctgctgtaa atcactcgtt gatttggtgt agtacgaaca 360  
gaaaacggac cacaaaaaac tcgaggatgg gaggaagatc atcatcaca ggacgttttt 420  
g 421

<210> 2208

<211> 372

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-E7

<400> 2208

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ggatcatggg cggtagaggc tgggccaact cctcggcagc ggcaacttcg ctaagggtga 180  
caaggcccat aagggtggcca ccggcgaggc tgtggccgtc aagggtgctgg acaaggatgc 240  
tgtgcaccgc tccggcatgg cggagaaggt gaagaccgag gtcgacgtga tgcggcgctg 300  
gcgccaccgc aacgtcgtcc gcctccacga gatgatggcc acgcgggtcca agatctactt 360  
cgatcatgga ta 372

<210> 2209

<211> 376

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-040-Q1-E1-A6

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cagagcatca agaagctggt aatcaagaac tacaaaggcg taaagtttcc aaaatggata 120  
aaaggtccca agctaggaga ctcttccccc agccttgtgt ttttggatct tgaaaactgc 180  
atgtcatgta ctaaactgcc ttcaattggc ctctgagtc aactccagtc cctgcaaata 240  
tcaaatgcag actcagtcac caccatcggt tcagaattcc ttgggaccac tgtactttca 300  
tcagccactc cattcnccaa gcttgaggtt ttaaagctca gaaacatgaa gaaacttgaa 360  
gagtgggtctt taactg 376

<210> 2210  
<211> 341  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-A8

<400> 2210

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ggaaaggcac ttggtgcaga ggtctatgac tgcaacaaca tgggtggagca agagctgcct 120  
ggaggcgggc tcctcctgta ccaaagcttc tgtgctgctg aagacgctgt tgctaactcg 180  
cccaaactcg ttttccactg ctttgacggg caaacgcttg agaatgctcc tcctcctatg 240  
aagaaggact acaaactggc taatcttcta tgctgggagg aggaagcgga ttccatggag 300  
gagaaagcgg gagtgcttga tgagtaagac agggttctgg g 341

<210> 2211  
<211> 374  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-B1

<400> 2211

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gcaaggggct ggtgcagcgg atgccgcgt gccgtcacgg cttcttccac gtggtgaaca 180  
acgactacac gactgggtc atgtacgcca tcggcggcag ccggaacccc accatcatca 240  
gccagggcaa ccgcttccgc gccgtcgacg acagcaggtt caaggaggtg accaagcggg 300

agtacacgca gtacagcgag tacaagaact ggggtgtggaa gtcgcaggac gacctgttcc 360  
tcaacggcgc cttc 374

<210> 2212  
<211> 212  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-B11

<400> 2212

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gtccgacagg gtccaccacc accaccgccg ctccgaggcg tcgtgcccgg caacctccgc 120  
ggccgtggcg gcggcgaggg ccgatgacgc cctgcgccag cgcgcggggg ggctcgtgca 180  
ggtcggggag cgggatcagg gcccgtgtc ga 212

<210> 2213  
<211> 211  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-040-Q1-E1-B12

<400> 2213

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aaccctgttt gcgaaaatta caatttgttt tcccctagga tgagtcggga ataacatcgt 180  
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<210> 2214  
<211> 403  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-B7

<400> 2214

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caccgcctcc gtgcgcgccg agaaccccaa cgagatgata accatcaggt acggcgaggg 120  
ctccacacacc gtggtctcct accgcggcac gccgctgtgc tccgggaagc tcccggcctt 180  
cttccagggc tacaagaacg tcaccgtcat ggacatctcc atggagggcc gccacggctt 240  
cgggtcgggg ctccagcagg cgctagagga gagcgagaag gccggggaca tcccgtcga 300  
catcttcgtc agcgtccccg tggagctgca gctcggtccc gtcgacctcc gccagattta 360  
agtccacgtt cactgcgcgc gcgtcctcca tagcctctc cgc 403

<210> 2215  
<211> 435  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-B8

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cggcaaagca agtccttggt tagtagcctt aagttcaatc ttataagttt actgaaaacc 180  
aaatagaacg ggcaggctgc atccgttcct agaaaaaaaa acaagggtttt tcttgaagag 240  
cctgttattg ccatcattga agaaaaaaaa ccgaaatggt ttaatcatgc tgcgtattta 300  
accataagca ctttatcgtg gaaaaaaaaa gagcaccctt ggctcaagaa tgctgataag 360  
gcttcaaattg tgtcactcgg aaagggttgtt cgggtccaggc tgaaacaatt gtcctctaag 420  
aacaagctta agaag 435

<210> 2216  
<211> 200  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-B9

<400> 2216  
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cgtttctctc gttaatccgg tagataatgg ccgatgccga ggatatccag cccctcgtcg 120  
gcaacaacgg aactggcatg gtcaatgctg ggttcgctgg cgacgacgcc ccgagggccg 180

tcttccccag catcgtgggg

200

<210> 2217

<211> 185

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-C12

<400> 2217

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cagcaatggg cgctgccca acaaaccaca agacgcttaa ggggcaggcc ccacctgagg 120

ccgccgtctc cacaccaaag gttgcccccg aggccactcc aatctccgtt gaggttgccg 180

ctgat 185

<210> 2218

<211> 296

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-C2

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gccatgggag ccgtcacggt ccaagatggt ccatcatgac caccgcggca cgaatgcgtc 120

gtgtccagtg acctccgcag ccgttctctc cgccaaggcc gatgacgccc ggcgccagcg 180

cccgcggatg cacgtgcacg tccgcgagca tgacaagtgc ccgtcttcca cggggcacca 240

gcacctgcac caccatcacc atcagctgcc gcggtcggca gcgttaccaa ccttgc 296

<210> 2219

<211> 357

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-C3

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taggcgactt catcgtcgct ctcttcatta ccagatttcc ttgtcatcgt caagatccaa 120

gcatagactt aatttagtta tagacggatt ggtaagcctc gtgaaaattc acgtggaccg 180  
 gggatatcatc cttgccgatc gcaacgcaag aggcatcgat ccgtaagtca tcttacggca 240  
 ttgcatgaag aagcggaaga caagcgtgaa gaagagatca gtgaaacca tatggcaaca 300  
 tgaacctaag ctgatecctcg cagatgccac ccaaccacag aatcttgaag tggtcga 357

<210> 2220

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-C5

<400> 2220

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 ccgggggcaa taatggctc ggttcgggt ccggcgacga cgaccgccgc cgtcatccta 180  
 tgccatgcg tcgtcctctc ctgtgccg gctgacgacc cgaacctccc cgactacgtc 240  
 atccagggcc gcgtgtactg cgacacctgc cgcgccgggt tcgtgaccaa cgtcaccgag 300  
 tacatcgcg gcgccaaggt gaggtggag tgcaagcact tccgcacccg caagctcgag 360  
 cgcgccatcc acgggggtcac cgacgggacc ggcacta 397

<210> 2221

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-C7

<400> 2221

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 tgctcaactt catcctcacc gtcgccggcc tcgccatggt cggctacggg atctacctgc 180  
 tcgtcgagtg gatgaagata tctgaggacg gcagcagcgg ggggttgacg gcgagggtgc 240  
 tggtctccgg ccggccgttg ttgggggctg tcgtctcgg tgacagcttc ctcgacatgc 300  
 tacccaaagc atgggttatt tatttgttca ttggtgttgg tgctactgtc ttctcgtgt 360



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tctt 424

<210> 2222  
<211> 407  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-H1

<400> 2222

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atcttaattt atggccagca gaaactgaac acctcattgt caaagccccg gcatctcaca 120  
ttgtgtagca tggaaaacag cttggatggt ccaatttcgc tgaagcagca gatgggttta 180  
aggtcgctga tgctcttcaa aagcccaa atgtcagagcaa tagatcttct catggagtca 240  
gcttcattgt tgcgtgtatt agatttgagc aagacagcag tggaggccat cccgaaatcc 300  
attggtaact tggtagattt aaggtacctc aatcttgatg gggctcaagt cagagacata 360  
ccttcttcca ttggatttct cataaacttg cagacctttg aaccttc 407

<210> 2223  
<211> 399  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-H10

<400> 2223

acgtcgtgag taaacagaca aaggcgacag catgttaagg ctcaaagaaa tgaagcaagt 60  
ggctactcaa atgagagcaa aggtagcgag ggcaagaatg atgttgtcta tcaatcagca 120  
acacccgtca tggattcgaa ctcatccaat cacaggaatg tgccaagatc tgatgtgaaa 180  
aacagcggcg tagtttcaca ctctagagcc tggagccga aaaccaattc ccctctcag 240  
gacagctcag acggcatgat tgctgttgac gggcaagtgg attcccatgg tggtaggctt 300  
gagatgaata cgtccaaagg atctgataca attaccatc tagtgaccag tagtgaaccg 360  
acgaaaagga atgattgcca ataagtttca cacaacaaa 399

<210> 2224

<211> 323  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-039-Q1-E1-H12  
  
 <400> 2224  
  
 atcgccggag cccggggctc cccaccgctc gcgcggggcg tcgccgatca tggccaccac 60  
 ccccgccgag gatccggagc ctgggctacc tcttcccaag gctctctgcg agcagccgcg 120  
 gcggggggcg ccgtgcgtcc tccttagctt ctgggcagcg cgcgaccgct tcttccgggg 180  
 ccggttcttc tcggcggggc tgcgccccct ctccgtccgc ctccccctgc cggccggcac 240  
 cagcaccgtc gtccacctct gggcgccgcc gcggtccgcg cggcgggccg tgctctctct 300  
 ccacggcttc ggcgcgtcgg cga 323

<210> 2225  
 <211> 389  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-039-Q1-E1-H2  
  
 <400> 2225  
  
 ttccgggatcc aaacacccgc ttaccgaatg gtcgttttct tccgcctctc ttcaatttta 60  
 agccccatga gctgaagaac gtgccggcgg atttcatggt gaaattggtc cctgagcatg 120  
 cacggaagca atgtgccttc gtaggggtggt gatctctgga taagaggatg acgactcgat 180  
 gattagctga ggaccaagtt aatgtctggt agaaactgcc ggagatcgac attgccagat 240  
 gtggtgtggt ataagatagg caatatgtgt gattattttt tgttcgaggt tatcaccccc 300  
 cttgccccag aaaagatgag aagatgtcga tgtaacaagc cctctgcgct tctgtaagta 360  
 gatgagtgtt gctgcatgcc ccttgggta 389

<210> 2226  
 <211> 421  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-039-Q1-E1-H3  
  
 <400> 2226

caacactcta aagtgagtcg tagtaattcc tctccccctcg cctcctcgtc tccccctagg 60  
ggatcgtcgg agaggaatcg caaagagggc cgtctcatcc gagttaagga agccatggag 120  
cacaaggagg ctgggtgccca ggcccccgag ggacccatcc tctgcatcaa taactgtggc 180  
ttcttcggca ggcgggagac catgaacatg tgctccaagt gccacaagga gatgataacg 240  
aagcaggatc aggccaaagct ggctgcctcc tctatcgaca gcatcgtgaa cggcagcgac 300  
gccgtcatgg agccggttgt tgctggcagc aacacggtag tagctgttgc ccaagttgag 360  
ttgcaaacaa tgaacgtgca gcagcccgt gatgttgccg gaccagcga aggggtggcg 420  
g 421

<210> 2227  
<211> 444  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-039-Q1-E1-H5  
<400> 2227

ctcgcggttc gatacaagcc tctaaagtga gtccatactg tcacggggtg ggaggggggtg 60  
ctggcgccaa catcagcgcc cttcgcgccc acgatggcac ccgtcacggc cgcctcctcg 120  
cagccgccga cctccctctt ggcggcctcg gcctccccac tgacactggc ctctattaca 180  
cggagatcaa gctcgggacg ccacccaagc actactacgt ccaggtcgac accggcagcg 240  
acatcctctg ggtcaactgc atcacctgag agcaatgccc ccacaagagc gggctcgggt 300  
tagacttgac gctttacgac cccaaggcat cctcgaccgg gagcatggtg atgtgcatc 360  
aggcattctg tgcagccacc tttggcggaa agctgccgaa gtgcggcgcc aatgtgccct 420  
gcgaatatag tgtcaactac ggtg 444

<210> 2228  
<211> 399  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-039-Q1-E1-H7  
<400> 2228

ttacaaccct ctaatctgag tcggatgaaa ccagaacatg cccagcaggg cgctgacgtt 60

cagccagctg ggcgcgcga ccgacgggtt cagcgagcag aacctgctgg gagaaggcgg 120  
 cttcggggcg gtgtacaagg ggctcctcca ggacaccaga gaggtcatcg ccgtgaagca 180  
 gctggacagg aacgggttcc agggcaaccg cgagttcctc gtggaggtgc tgatgctcag 240  
 cctcctgcac caccgaacc tcgtcaagct gctgggctac agcaccgact ccaaccagcg 300  
 gatcctgggtg tacgagtaca tgcccagggg ctgctgggat gaccacctcc tggacctgcc 360  
 cccgagctgg aagcccctgc cgtggcacac gccgatgcg 399

<210> 2229  
 <211> 387  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-039-Q1-E1-H8

<400> 2229  
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 tgcgcaacca agcccaagac gcttgagggg caggccccag ctgaggccgc cgtctccaca 120  
 cccaagggtg cgcccgaggc cactccaate tccgttgagg ttgcggctga tgaacaggta 180  
 gctgagaagg tgggtggtgga ggagccggct gcggcgggccg acgttgagca tcagaaggct 240  
 aatgaggtgg tcgctccaga ggcgggccgtc gccgagcccg atcacaagga ngangaagcc 300  
 gtggagaaga ccgtcgtcga ngangagaag cagcggcagc cgccaatgca gagganaagg 360  
 tcgccaccgc cgccgagacc acgacga 387

<210> 2230  
 <211> 403  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-H9

<400> 2230  
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 ccgcgttgtc cccgagctgt ttggcgagga ccaattccag cggacatgca accaggtgca 120  
 cttcaggaag atgtgccaga gcttgacgag gctccccagg gtgaccacgc cgcgcgagct 180  
 gctgctggcg tcgatgcgcg tcgcgggcga gaaggccagg gaggccaaga gccgggtgga 240

cgagttcgcg gcgaggaacc acgagggccg gccgatggag tccatcctcg gcgcctgcag 300  
 caacgggtac ggcaacgttg tgcagacgct cgaggaggcg cggaagatcg tcgccacgcg 360  
 ggcggcgggcg ggcacccagg cccaggccga cgacatgaac acg 403

<210> 2231  
 <211> 395  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-040-Q1-E1-A1  
 <400> 2231

acaagcctct atcgtgattc gatacatgga taacctgggtc atcaccggca agggaaacct 60  
 tgacgggcag ggcccagctg tgtggagcaa gaactcctgc accaagaagt acgactgcaa 120  
 gatccttccc aactcgctgg tgatggactt cgtgaacaac ggggaggtgt ccggggtcac 180  
 gctgctcaac tccaagttct tccacatgaa catgtaccgg tgcaaggaca tgctgatcaa 240  
 ggacgtgacc gtgacggcgc ccggggacag cccaacacg gatggcatcc acatgggcga 300  
 ctcatccggg atcaccatca ccaacaccgt cattggcgctc ggcgacgact gcatctccat 360  
 cgggccccggg acctccaaag tgaacatcac cgacc 395

<210> 2232  
 <211> 336  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-040-Q1-E1-A2  
 <400> 2232

gtccgtccaa gcctctagac tacgtcctca taccgccttc acgcctccct caccaaataa 60  
 ggtcccgccc ttttccgaca ttcacagggg ggacaggaaa tcagcggcca tggcctcgat 120  
 tccggcgacg accttcgccg tcatcttata cgctctcttc tgtgccgcgg ctggcaccgc 180  
 cgtcgacaac gacctccccg actacgtcat ccagggccgc gtctattgcy acacctgccg 240  
 cgccgggttc gtgaccaatg tcaccgagta catcgcgggc gccaaagtga ggctggagtg 300  
 caagcacttt gggaccggga aacttcaacg ctccat 336

<210> 2233  
 <211> 424  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-040-Q1-E1-A4  
 <400> 2233  
  
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 gcacaggcga caaggcttgt gtcgggctcg ggagcagtga tataaacatc ccgatggaag 120  
 aagcggttga tgaacctgtt aaaccggcgg aagctgtgga cgaagctggg ctgaagagag 180  
 atgtctgctg ttcaccagct gagccaaacg aagccgttgg tcagaacgag ctcaatgagg 240  
 ctgctgtcgt cgggtgaaacg acgactgaac cgaaggaggc tgaggatgaa gccaagataa 300  
 taaagcaagt cgactgcgaa actgcatcaa aagaagttgc tagtactggg gccgagtcaa 360  
 gggacgatgc cgctactatg gaacgcgagc cgctggtagc agcagcaaca gcagcacaag 420  
 gaag 424

<210> 2234  
 <211> 402  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-039-Q1-E1-G8  
 <400> 2234  
  
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 gtgaccatcc aggtgaatgg caatctgctg gcgaccacgg acctaagcca gtacaaggat 120  
 catggtaatt ggatcgagat tctacgcgtg gacaaccttg tcatcaccgg caagggaaag 180  
 ctgcacgggc agggggccagc cgtgtggagc aagaactcct gcgtcaagaa gtacgactgc 240  
 aagatccttc ccaactcgct ggtgatggac ttcgtgaaca acggggaggt gtccgggatc 300  
 acgctgctca actccaagtt cttccacatg aacatgtaca agtgcaagga catgctgac 360  
 aaggacgtca atgttacggc cccgggggaca gcccaaacac ga 402

<210> 2235  
 <211> 358  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-F3

<400> 2235

gggtcggccc aagcctctag actgagtcac actacaatgc agaggaaaag gtcgccaccg 60  
ccgccgagac cacgacgacg gtggaggcga agaagaagga cgtcgaggag gccaggaagg 120  
agaagcagggc gcagcaaagc tgaccgactg tccgtgcatg cgcgtgccaa ctaataataat 180  
tattgggtga tgatacctga tgatcagtgt gtgatcgagc aaggagacga cacttgaatt 240  
ctctacagtt ggcatacgcg cataggtcgg gagagacact ctcgactggc cacaccatgt 300  
aaciaaactaa cttctcttga tgtctcccat tattttcttc cacggagtgc ttctgatg 358

<210> 2236

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-F5

<400> 2236

tcgcgggtcg acacaagcct ctagactaag gcgtctgact tcgggctgtc caaggacggg 60  
cccgggatga accagctgca cgtgagcacc gccgtgaagg gcagcttcgg gtacctggac 120  
ccggagtact tccggtgcca gcagctgacg gacaagtccg acgtgtactc cttcgggtgtg 180  
gtgctgctgg aggcgctgtg cgcgcggccc cccatcgacc cgcagctgcc cccggagcag 240  
gtcagcctgg cggagtgggg catgcagtgg aagcgcaagg gcctcatcga gaagatcatg 300  
gaccccaagc tcgccggcac cgtaacccg gagtcgctcg ccaagtctgc cgagaccgcc 360  
gagaagtgcc tcgccgagtt cggcagcgac cgcactctca tgggcgacgt gctgtggaac 420  
ct 422

<210> 2237

<211> 428

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-039-Q1-E1-F6

<400> 2237

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 gtcgaagcag cagtaccaat gcatcaagta cagtcaccga ttcactgcta cctcactag 120  
 ttttaaattt atcatcacca gaagtagaag acgcatcaaa gttttcagct cctgctgtgg 180  
 tggaaaataa ttggttttaa cgatcactgc cttcaaaaac ttggaaatta agaactgttg 240  
 attccacctt tagtcatgaa gagagggagc gtacgaggag gagagctgct gtgagatcag 300  
 cttttgtcca gcatctcctt gtcaccacca tttttgaaga ctagcagatc aagcacagct 360  
 catgcatagg aatcttgtgg gcgggccttt tgcncactca tttatctgga tggataatgc 420  
 actaatta 428

<210> 2238  
 <211> 297  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-039-Q1-E1-F7  
 <400> 2238

tgagtcgtat taaaatacgt aaaggtgctt cttgggaata gcagtcgaag cagcagtagc 60  
 aatgcatcaa gtacagtcac cgattcactg ctacgctcac taggtgggaa tttagcatca 120  
 ccagaagtac aagaggcagc aaagttttca gctcctgctg tgggtggaaac taattgggtg 180  
 agacgatcac tgccttgaga agcgtggaga ttaagaactg ctgagtcgag ccttagtcat 240  
 gaggagaggg agcgtaggag gaggagagct gctgggagat cagcgtatgt cgagcat 297

<210> 2239  
 <211> 417  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-039-Q1-E1-F8  
 <400> 2239

tcgtcggtcg atacaacca ctacactgcg tcgtctcact caccocgctt tcacgcctcc 60  
 ctcaccaa ataggtccgc ccttttccga cattcacagg ggggacagga aatcagcggc 120  
 catggcctcg attccggcga cgaccttcgc cgtcatctta tccgtcctct tctgtgccgc 180  
 ggctggcacc gccgtcgaca acgacctccc cgactacgtc atccagggcc gcgtctattg 240



cgacacctgc cgcgcggggt tcgtgaccaa tgtcaccgag tacatcgcgg gcgccaaggt 300  
gaggctggag tgcaagcact tcggcaccgg caagctcgag cgctccatcg acggggtgac 360  
cgacgggaac ggcacgtaca cgatcgagct caaggacagc cagaggagg acatctg 417

<210> 2240

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-F9

<400> 2240

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ggcggcaagg acctgacaga ggagcagatc gcctcgatgc gggaggcctt cagctgttc 120  
gacacggacg gggacggccg catcgctccc acggagctgg gcgtcctcat gcgtccctc 180  
ggcgggaacc caaccaggc gcagctccgg gacatcgccg cgcaggagaa gtcacggcg 240  
cccttcgact tcccgcgctt cctcggcctc atgcgcgcc acctcaggcc cgagcccttc 300  
gaccgcccgc tccgcgacgc cttccgcgtc ctcgacaagg acggctccgg caccgtcgcc 360  
gtcgcgcgacc tccgccacgt cctcacctcc atcggagaga agct 404

<210> 2241

<211> 428

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-G1

<400> 2241

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cctgcgcgtg aacgtgaaga tgatcaccgg cgaccagctg gccatcggca aggagacggc 120  
gcggcgcttg cgcattgggca gcaacatgta cccgtccacc accctgctgg gcgacaacaa 180  
gaccggcgag atgggccgcc tgaacatcga cgagctgatc gagaaggccg acgggttcgc 240  
gggggtgttc ccggagcaca agtacgagat cgtgaagcgg ctgcaggacc ggaagcacat 300  
ctgcggcatg accggggacg gcgtgaacga cgcgccggcg ctgaagaacg cggacatcgg 360  
catcgcggtg gacgacgcga ctgacgcggc ccggagcgcg tcggacatcg tgctgaccga 420

gcccgggc

428

<210> 2242  
<211> 290  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-G10

<400> 2242

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gctacgcaaa tgatagcata ggtagcgagg gcaataatga tgttgatgat caatcatcaa 120  
cagccgtcat ggattcgaac tcatccaatc acaggcatgt gctacgatct gatgtgaaaa 180  
acagcggcgt attttcacac tctagagcct ggaagccgaa aaccaattcc catcctcagg 240  
acatctcaga cggcaagatt gctgttgacg ggcattgtgga ttcccatggt 290

<210> 2243  
<211> 389  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-G12

<400> 2243

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cgccggccaa caactcagcc gctgcaaccg ccacatcagc catgggagct tgcgcaacca 120  
atcccaagac gcttgagggg caggccccag ctgaggccgc cgtctccaca cccaagggtg 180  
caccgagggc cactctaata tccgttgagg ttgagggtga agaataaggta tcttacaatg 240  
tggtggtgga ggaaccggct gcggcgccgc acgttgagca atagtaggct aatgaggtgt 300  
tctctccaga agcggccgct cccgagcccc atcacaacga cgacgaaacc gtcgagaaaa 360  
ccatcttcta ggaggacaat ccaaccgga 389

<210> 2244  
<211> 116  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-G2

<400> 2244

tggtgatcgc gcatcactga aggggagcag tggaatacgc cggtttcaga tctgccgtcg 60  
tcatccatgg catgggaacg ccgtggtctc attggggggc ataaccgtgt tggcgt 116

<210> 2245

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-G3

<400> 2245

gggtcgaccc aagcctctag agaaactcgt attattcttc ctctcctcg tcctctcaag 60  
ttctgtctct tgtctctgtc atcctcgtc ggcttccccg gttcttgaga ggggaaagag 120  
gaggcggatg agatggatcg ggagggatga gaggttccca gtgtgggaag ccgcgctcgg 180  
cgctggagtc tccgccgaca tcgccgctgg gctcatcgag gtttaccgtt cgatgcctga 240  
tcccgactac agcttcgtca agctgccacg taatctccag gaactccaaa tcctcattgg 300  
ccatcttgag aactatacta ggcactacac cctagacgtg ttcgtcggct agtgcaccgt 360  
gtagatcttc atgcagagct tcatgatcac tagaacgata ttcatgtcaa 410

<210> 2246

<211> 391

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-G4

<400> 2246

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acagcggcct cgacccgat cctctctggc gcgtggcgcc gaccatggcc cagcccagc 120  
cggctgcggc ggtccggtgg cctggcccc acgcctagca tggggcccg cgcggcctta 180  
gccagcgcgg ggcgcggctg ccagccacg gcacggtggc acgggcgcgt aggcgacggc 240  
cccgtccctg acggcgcgcg ggcgagccc cgggtgtggcg ggcacggcct ccagcgggcg 300  
cggccttagc cgcggaggcg agcgcgcggc ctcgggccga tggcgggcgc gaccccgctg 360  
gcgctaggcc ccatgcgcga cggcgcgggc g 391

<210> 2247  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-G5

<400> 2247

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 gcaaacatga gaacctggca cggaagatg gtaaccagaa ggtgagact gaacaggagc 180  
 aggctaattcc tacactacgt cgccaaggcc agcccaatgc aaggtaccac aggggaggtg 240  
 ggtcacacag ggaagggggg gggtatgaca ctgggaggcc aaaccatgtc acaaagtgtg 300  
 agaggcggaa ggtggcagc catcttgaat accagccagt cggaccccaa acaaagctg 360  
 cagacttcca acagagcctg ggcattggaag aacgaaccga agggcctcct gcttctggac 420  
 aagc 424

<210> 2248  
 <211> 373  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-E12

<400> 2248

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 tcatcggcgg cgacgtgcct gtgcctcgct ctgcgcgg ccacgctggc gctggcccac 120  
 ggggcgcaag gaggaggacc atcggcatcg gcggcggacc tggacaaggt cacggccgag 180  
 accttcttgg acatcgagat cgacggcaag cctgcaggcc ggatcgtgct gggactgttt 240  
 ggggacaccg ttctaaaac agcagagaac ttccgagcac ttgacacagg ggagaaagga 300  
 attgccaagt ccggcaagcc tctgtggtac aaggggtcga cgttccacag gatcatcccg 360  
 gggttcatga ttc 373

<210> 2249  
 <211> 352  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-E5

<400> 2249

gatacaagcc tctaaaatga gtcgtcttga gcgaactgga gacccgatgc cgtctacact 60

tccaacgtcc aattctacta gactttgaat tcccttcgat tcatccggca cagcgggcta 120

tggaccttca gcagcaagct aattaagttg gcagcatgca ccgctaacct tatatactac 180

tgagacttcc aaattctagt atatgtaatc cttttgttcg ggttcatgat cgaattccaa 240

agagtggaaa acaagcaaaa ggttaaatat acatgccatt tttggaggca tttttttcat 300

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<223> Clone ID: LIB148-039-Q1-E1-E6

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gcgacgtgga tggcggcgcc gccccggcgt ggcccaaggc cgtgaccaac ggcggcgtcc 180

acgagctgct ggagtgtccc gtgtgcacca actccatgtt cccgccgatc caccagtgcc 240

ccaatggaca cacgtgtgtg tccacatgca aggccagagt acacaaccgt tgcctacct 300

gcaggcaaga gctgggcgac atcaggtgcc tggcgctgga gaaagtcgcc gagtcgctgg 360

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ataa 424

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-E7

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 ccggacacgt ccggcctcgg caccgggtcc caagtcttgg cgggcggcct cgccgggtcc 360  
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 tctcgtcggc tcgaccatag ccgacgggaa ttaactgggc cgacgagaat taccctatac 180  
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 acaaacacat gcatttagac ataaacacat gcatttataa ttaaaatata caccaacgag 360  
 tacgacatag tattgaaaca taacatccac caacaagtac gacatattat tgaaacataa 420  
 catccaccaa cgagttcgac att 443

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 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-039-Q1-E1-E9  
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tacctaatgc ttctcacttg tcattttgga cacatgttcg acctattcaa ttttaatgag 240  
atgcctgatg aggctacttg caaaaataca tgtggtgttc tcaatgaata atatcaaag 300  
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ctaaaagatc caaacttaac atattgctgc atgcgac 397

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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-F1

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taggtgtccc gggcaacgcc acctcccaac tgcaagccgg tgtacctccg cagcgtgcaa 180  
ccattgctga cagcccgag atgccgcggt tcgttaccct gcacgaccag gcctagccca 240  
tgctcgcggt ctgectgcca gcgcagcggc acgaccagct aacagtatcg tcgtcatgct 300  
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tctcgccgt 369

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<211> 396  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-F10

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gtcgcgcgtcg ccgagcggga cgtcgagctc gtacgacctg tcgggggcca acaagtcgtg 300  
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cgaaggcggg ttcgggaagg tgtacatggg cccctt 396

<210> 2256  
<211> 381  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-039-Q1-E1-C11  
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ggaggaggcc gagatgggtca tgttcggcgc gctggacgag ctgttcgcca agaccgggggt 180  
gcggcccaag gagatcggcg tgctgggtgg gaactgcagc ctcttcaacc cgacgccgtc 240  
gctgtccgcc atggtcgtca accactacag gtcgggggc aacgtcgcca gctacaacct 300  
cggcggcatg ggctgcagcg cggggatcat cgccgtggac ctgccaggg acctgcttca 360  
gtgccaccgg ggcaacctac c 381

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<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-039-Q1-E1-C12  
<400> 2257

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aagcacatca agtcgcgatg gagatgaaga aggtcgctg cgccgtcatc gccgcgcgg 180  
cctccgcgat cgtggctctc gccgtcgagg ccacgggtgc cggcccgacg agcgcctcgt 240  
cggccgcggt cccggccgtc ggcgcgggtg tgggcgccgc cgtgagctcc ttcttcgggt 300  
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<210> 2258



<211> 402  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-039-Q1-E1-C2  
  
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 gcgagatggg ttccgccgtc ctcttttact gcatctgcat cgccgccgtc gtcgcattgt 240  
 cgtcgtccat ggtcgccgtc aggtccgccg cctcggggga aaccccccaag ttcattctcg 300  
 cgagcgccct tgagtgtctc gctaacgtaa cggaatagc aaaggcgcgc aagctgatcg 360  
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<210> 2259  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-039-Q1-E1-C4  
  
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 aatccaatgt ggaatacaca gaggacgaga agaaagccgt gatcgcggtc ctgaaaaaga 180  
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 tggatgatgt catctcgatt ctggatgagc gtgaacctga ggaggtgcat gctgtggatg 300  
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 tgatgctaag atttctcaag gcaagaaagt ttgatat 397

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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-039-Q1-E1-C6

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caacaatggc gctgacgcgg tctcctgcac tgccatccac tagcgtaaca ataagcctac 180  
aggagaaaga acatatcaat ggggatgttc ccacgatcat ctgggcccga agcaaagatg 240  
aggaggcggt gttcagtgtc cgagaatcta ccaacgacca tggccatcgc ttgacgatgg 300  
aatgctccac tcccgtttcc tcgagtagcc cttctactcg caacaaccgc ggggcgttca 360  
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<210> 2261

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-C7

<400> 2261

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ggagatattg gagttattat atatatatat ataggtagac gatagataga cagctagatc 180  
tatataacca tggatgatgg gttccgatgg atcataccgg gctctttcgt cctgtacttg 240  
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tggcagcagc gcaagctcat ggtcgacgcc gcggctgagg ccacgtacaa gcatgacccg 360  
gtcgaggtcg ccaaccaact taaccgtgca gtccacagat ccgtcgagaa ggaggacatt 420  
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<210> 2262

<211> 406

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-C9

<400> 2262

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cgagcaagcg gcgctctccg acatgcgagt agctacggca ccgcacaagg cacgagggtt 180  
gagcagcgtc atggaaggcg cgagggtgtgt gcagcgatga tcgcgcgtga catcctccga 240  
tccagcgtag ttccggcggg ctgagtgacg acctccatct gttcttgtgt catcaacgac 300  
gtcctccgat gactacctcc tctaattcgt gttgtctttc gattattatg ttttatgcct 360  
accacatgca ctatttacgc taaaaactat aacgatttta tgcttg 406

<210> 2263

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-D5

<400> 2263

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gcaaggctga cggcaaggag aggttcggct tcaacggcgt gtcgcacgtg gaccggaaa 180  
ccccgtgaa gtcgcccag tacttcaacg ccagcgacgg cgtgttcaag tacaacctca 240  
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ccgagttccg cacgttcatt gaggtggtct tcgagaacct cgagaagagc atcgacacca 360  
tccacatcga cggctacgcc ttcttcgccg tcggcatggg gcccgcaaaa tggacggcag 420  
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<210> 2264

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-D6

<400> 2264

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ggcatcctcg tcatcatcgc tagttctgga agagttggct cttggcttgg atctctccac 360  
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<210> 2265

<211> 384

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-A6

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cagctgaagc tgtggttcgg accctcgtac gtaaacatgg gcgtgactcc ggattttctca 360  
tagagtctgc tgggtaccatc ggggt 384

<210> 2266

<211> 395

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-A8

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acaccatcaa cggccagagg ttcccgtcgg agctgcacct ggtccacagg agcgccgacg 180  
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agctgaagcg gcagctgggc gacatggcca aggaccggtg cagcttcggc gaggaggagt 300  
cgcaagaggg cgtcgccctc atccacctgc gctcgtgca gaagcgcacc ggcagctact 360

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395

<210> 2267

<211> 387

<212> DNA

<213> Zea mays

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aaaccacatc aagtcgcgat ggagatgaag aaggtcgcct gcgccgtcct cgccgccgcc 180

gcctccgccca ccgtggtcct cgccgccgag gcccggcgcc ccgccccac cagcgccctc 240

tcggcccggt tcccggcgt cgccgccgtg ctggggcgct ccgtgctctc cttcttcgcc 300

tactacctgc agtaaaatta aaggagggtc ggaggagat gctgctggct gccattgcct 360

gtattcgggtt ggattccgtt tatatat 387

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<211> 391

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-B1

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tgctctgctc tcgcccgccg cacgtggcg ctggcccacg gggcgcaagg aggaggacca 180

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gcagagaact tccgagcact ttgcacaggg gagaaaggaa tggccaagtc cggcaagcct 360

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<212> DNA

<213> Zea mays

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<213> Zea mays

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gataccgagt ctgttatgcc acaggatttg tcggaggccg cactcctttc ggtgacgatt 180

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gagctcgggt tcttgttggg ttttcctttg ggtggagagc gagggagcgc agtcgagagc 180

cagcgagcag tctctcgtgc agtgcagtgc agtgcagtgc agctccggcg tagatgagat 240

tgtattgtga ccaagccggg agggaaagca gggaggggag gacaaagatg ttttgtcacg 300  
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 <212> DNA  
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<223> unsure at all n locations  
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 <211> 402  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-B9

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 <223> Clone ID: LIB148-039-Q1-E1-A10  
  
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 <400> 2277

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 cctcctgccc tcgcccggtgc tctcagatct cgcgcgcgcc ccgcaaagg taactttgag 120  
 ccatgggcac agttgtggat gctccagcag ttgtggctga agaggtcact gagaacatgt 180  
 tgggtggtaa gaaagttaca gctgtatttg ttctaggtgg tcctggaagt ggaaaaggca 240  
 cacagtgtgc caacatttg gaacactttg gattcaccca tcttagtgc ggagatcttt 300  
 tgcgtgcaga gattaaatct ggctctgaga atggaaccat gattgaaaac atgataaagg 360  
 agggaaagat tgttccatc 379

<210> 2278  
 <211> 426  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-039-Q1-E1-A2  
 <400> 2278

tcgatacaac actctagagt gagtccatt atggccgga acgtggcgcc gtactacccc 60  
 tccacggaca tctcactcgt gtccgtcggg aacgagatca tggacacggc cgacaaggcc 120  
 ctcatctcca acctggtgcc cgccatgcgc gcgctcaagg cagcgctggt ggcgcgggg 180

tacccgaaga tccgcgtctc gacgccgcac tccctgggca tccgtgccgt ctccgagccg 240  
 ccgtccgccca gccggttccg cgacggcttc gaccgcgccg tggtcgcgcc gatgctggcg 300  
 ttccaccggc agagcaggtc gccgttcatg gtgaacccgt acccgtaactt tgggtacaac 360  
 ggcgtgacgc tcccctacgc gctggcgccg cccaacccgg gcgtgccgga ccccggcacg 420  
 ggcatc 426

<210> 2279  
 <211> 353  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-A3

<400> 2279

cgtcgggtcga tgcattccgta gaaacttggg ctatctacca gtgcgtgtgc tcatccgtgc 60  
 acgccgggaa tggggtcttc cgcccggtgc ctcattcgcc tccgtgtcgc cgccgcctcg 120  
 ctgcgccgtcg ggctctcga tggcggcagg agtgggatgg cggcgccagt gtaccggtac 180  
 gcggcgggga gcccacacg gccggagtac tgggggaagc tgagccccgc gtacaagctg 240  
 tgcggggagg ggaagcagca gtccccgatc gacatcgta ccaagcatgc cgteccccgc 300  
 gccaacctcg acactctcaa ccgcacctac ggcgccatca atgccacgct cat 353

<210> 2280  
 <211> 434  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-H11

<400> 2280

tcgcgggtcg atacacgcct ctaaatagat tcgtatgata ttgggattta attaaagcatt 60  
 gccgcaaagg atgttgggtc ctttttgggt tctctgttct attgccaca cttgataatt 120  
 tatctcatca accttgtgag aaggcttctc ttttgaagaa taatgaacaa ccatgaggtg 180  
 ggcaattgaa ctcttgata gctggtgaaa aagtcatgtc acgtcggtag gctatagtat 240  
 taggcatgcg gacaaaaatg gtttctcatt taaggatcta gacaatggta ctttgtgtc 300  
 aaaagatgaa atccaagacc atggtgacat ccattctaata gatgatgtta agaagaatgt 360

gtgtggcaaa caagatttag atcaagattg ttcaatggat atatccagt acagaaagat 420  
gaatatacaa tatg 434

<210> 2281  
<211> 433  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-F7

<400> 2281

tcgtaggtcg ttacaacact ctagactgag tcgtactcac ctacacaaaa taataaggaa 60  
agggtcccgcc cttttcctcc gacatccaca ggggggaggg gaaaacacgt gcattcacc 120  
ggcgggaata atggcctcgg ttccggctcc ggcgacgacg accgcgcgcg taatcctatg 180  
cctatgcgtc gtctctctct gtgcgcgggc tgacgacccc aacctccccg actacgtcat 240  
ccagggcgcg gtgtactgcg acacctgccg cgccgggttc gtgaccaacg tcaccgagta 300  
catcgcgggc gccaaagtga ggctggagtg cagcacttc ggcaccggca agctcgagcg 360  
cgccatcgac ggggtcaccg accgcgaccg cacctacag atcgagctca aggacagcca 420  
cgaggaggac atc 433

<210> 2282  
<211> 419  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-G8

<400> 2282

tcgcggtcg acacacgcct ctagtgcgcg tccgcacagc tgccaccgag atcctgtcgg 60  
caccgcctc cgcgcgctcc cgctgcgcga cgggaccaac ctgttcgcct gttcatccac 120  
tcaggacat tcacgcccgc atctcgccgt gggcagcacc gcactacca ccgcgcgcg 180  
agtgaggtca cgagtcagct gaagagcaag ttggtacctg gaatctcaag tcccaggtca 240  
agaacaggta ccgcaggatg aggcgcattg aggatgctgt ggcgagttcg tgagaggtct 300  
aggccatcgt ctcccagtca actttgggtt gctggaccgt tgtctcctta taatgaaatt 360  
atattttat ttgtataga actcctgtta tatagtaaag atgtgacatt cgatccaaa 419

<210> 2283  
 <211> 116  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-038-Q1-E1-E5

<400> 2283

gcgtatgaca ttactacacc ctgatgtgag tcgtattaaa acnccgacat cnatcgacag 60  
 atacataggg ttgaagaaag tggcatcatc gtgagccggt tcgcttcgcg ctatcc 116

<210> 2284  
 <211> 422  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-E9

<400> 2284

ctcgtaggtc gatacaagcc tctaaagtga gtctaataca ggaaagcaag caagaatcat 60  
 cggaataatg gcccggtgcat gcggtgttcct cgtcgtgctc ctccctggccg ccacgcggt 120  
 ggcaccgttc gcgggcgcgcg caccgctgga cgttggtggag ggtaggtcca tggcatccgc 180  
 cgatgcaccg gaggcggcgg ccgatgctcc cgctcctagc cccgactccg cctcatcccc 240  
 agactcgtca tcggaggcgc cctctagcag cagttcctcc gactagacgc aaaaacctct 300  
 tcattctctg gaataactaa cagtatatac gttgcaccct gatgatatag aaacatgtac 360  
 gtgcatcagt gtatggaatg cgagtggcaa acacatggaa tgtgcttgcc taattagtgt 420  
 tt 422

<210> 2285  
 <211> 427  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-D7

<400> 2285

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acagggagct gatggcggcg ctgtacctcc aagtaagcat catcagccag gcgctcatct 120  
tcgtgacgcy gtcccggagc tggtcgttcg tggagcggcc gggcttctc ctgctcttcg 180  
ccttcttcgc cgcccagctg gtggcgacgt gcatcgcggt gtacgccgac tgggacttct 240  
gccgcatcca ggggatcggc tgggcgtggg gcggcgccat ctggatgttc agcatcgtca 300  
cctacatccc gtcgacgtg ctcaagttca tgatccgcgc cgcgctcaga gacaaggcca 360  
cgggcaacaa cgtccacaac aagtgatagc tttatctggg tgcttgcgc ggacggcggt 420  
taggaac 427

<210> 2286  
<211> 427  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-D9

<400> 2286  
ctcgcggggtc gacacaagcc tctagatgta tgcggatgag gccaatcctt ctctatctc 60  
gtcccggagt cccgggggaa attttgcccc agaaacacta gcgcgtcgga tcacaagcaa 120  
gggcgaaaat tttctgtggc tccagcggct gaaggacgtc gcggcaccca tgtcggacga 180  
cactggtggc cgcgctctac ccaagttcgg cgagtgggac gtgaacaacc cggcgtccgc 240  
ggacgggttc acggtcatct tcagcaaggc cagggacgag aagaaagctc ccccgacca 300  
aggccacatc aggaacaaca ggtcgggtgc ggctgacagc aaggactcca gggccgagaa 360  
gatgacctcc tacaacgcca ggaccaacgc gtcgaagaaa tggttctgcc gtgtctcgcc 420  
caacccc 427

<210> 2287  
<211> 430  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B4

<400> 2287  
gtccatacaa caccctacat tgagtcatgc taaggattcc ggcttctatg gggcaccgtc 60  
aagagctttc ttgacccaaa gaccactgca aagattcatg ttctgggtaa caagtatcag 120

agcaagcttc tcgaggtgat tgatgctagt gagttgccag aaatTTTTtg tggaacctgc 180  
 cgatgtgaag gtggttgcac gaaggctgac aaaggccctt ggaaggaccc cgaaatcatg 240  
 aagatggttc aaagtggatg tgggaggtgt ggatcactcg gtacggcctc tttcgaggct 300  
 ccggagaaaa tgatttgtga agacgacacg taccctaaga aacaagcttt gtttgatggg 360  
 gaaacacaat tagctggaga cgagcattct cagtcacaga aaatttcccg tggccggatt 420  
 gaacatcctc 430

<210> 2288  
 <211> 399  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-038-Q1-E1-A11

<400> 2288  
 cgatacaagc ctctagaggg agtcgatatt acctccaata aaagccagca catccaaata 60  
 aaaccgagag acctagccc tcaggcaagc cgaccgccga cgtaccaccg cgccaacccg 120  
 agagaaagat ggagatgac aagaggatcc tcatcgccgc gctcctcgta gtcgccgtct 180  
 cggccaccgc agtgetggcc tccaccgagg ccgccgccgc cggcgcccca gccgcctccg 240  
 agtcgtcggc gtccgccgaa gccccgctg gcgccgccgg cgcgggcgcc ggcaccggca 300  
 ccgccgcggg gccctccgcc agcggcgccg cgcgcgcct cgcgcgcgcg cccgccgcgc 360  
 tcctcttctc cctcgtcgcc tactagctgc actaagcgg 399

<210> 2289  
 <211> 433  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-038-Q1-E1-A10

<400> 2289  
 ctccggggtc gatacaagcc tctacagtga cgtcctacta acgcgtccgt caccagcctc 60  
 ctccgacacg taaattgcac cgatcgagac acagggaaca tcggcaacag ccttggcggg 120  
 aaccctgccc ctgtagctcc tcgatcgcg ctgtcacgga gctcttacc acgcctgcgg 180  
 ccgtggacgc ggccaggctg gcggacatct gcatgggaac cgcgttcggc gatatctgca 240

ccaacacggt ggggagcgaa gtgcatagcg ccggtgtgtt agacgccatg gcggtgttgc 300  
 agattcacgt gggcgcggtt aacaagcaca gcgaggagga gagggcacac gtcaaggatg 360  
 ccgcaatgac agcgtcacac aaggcacgga cgggtgctgga cctgtacaac agcctgtacc 420  
 tgcacctaga tga 433

<210> 2290  
 <211> 425  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-037-Q1-E1-H11  
 <400> 2290

acgcacgggt cgatgcacgc ctctacaatg agtcgtcgac gtgcccgcga cggggcaggg 60  
 cagccggtgc agtcgcttgt gccccaccgt cgtgccgttg gccacggggcg cgcggtccac 120  
 gtacaccgcy tgccgctcca cgcgctgccc cagcgccacg tgctcctgga tccgcaccac 180  
 gttgaacgcc cgcgcccgcg cgcgcgggcc cgcgcgcagc tcgatccagt acccgttccg 240  
 gcgcccgtcc tcggccgctc gcgcccagta cgtgtcgctc cggccgtcca tcacgttgcg 300  
 cgccgcgaac cgggcgcgcg gctcgtgctt ggccctggcc tcgctgcccg cggcgaggtc 360  
 cgtgccgaag acggtggcca cggcggcccc gaactcgcgc agccgcgcga tgtcggcgtc 420  
 ctcca 425

<210> 2291  
 <211> 384  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-037-Q1-E1-H12  
 <400> 2291

ccaagccttc ggttcatttc cccccaaccg gcaaggaaac ccgggggcaa aaggaaggaa 60  
 aatgggttcc gcaaaaaaag ctccccgggt ggttttcaac ccaaccgttg gaagttccgt 120  
 ttgcacaacc aaaaagacaa gagccaagaa agaagaatcc gccggaaccc ctggtgggtc 180  
 tgctggaggc agcggcgggg cgttcgacat ctccaagctc ggcgcgacca gcgacggcaa 240  
 gacggactgc acaaaggcag tccaagacgc gtggacgtca gcgtgcgaag cgaccggaag 300

cgccacgggtg gtgatcccca agggcgacta cctggtcggc cctctcaact tcaactgggcc 360  
atgcaagggc agcagcatcg ccat 384

<210> 2292  
<211> 423  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-A1

<400> 2292

actcgcgggt cgacgcacgc ctctgcacag agtcatctat accagccagc cagcagccag 60  
cttgcctgcc gcgcccgtcc ttcttctctg cctccgttcc attccgtccc gccctccacc 120  
gccgccgccg cattcagggg tggagatgaa gaagatcgcc tgcgcgcgtcc tcgtcgccgc 180  
ctcggcggcc accgtggcgc tcgccgcgga ggctccggct ccggccccca ccagcggctc 240  
ctccgcgcgc gcgcccgcgc tcggcgccgc cctcggggcc gccgtgcct ccttcttctgc 300  
ctactacatt cagtgcgccc gccggggcgc ccgatgccg aggaagagac gaaggggaga 360  
gagagtgaca tggtgcgcgc cattccgatg cgtgggcatg ttttttgatt cgacacacct 420  
ttt 423

<210> 2293  
<211> 310  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-037-Q1-E1-E9

<400> 2293

gtgaacgtga agatgatcac cggcgacaag ctggccatcg gcaaggagac ggcgcggcgc 60  
ctgngcatgg gcagcaacat gtaccctgcc accaccctgc tgggcgacaa caagaccggc 120  
gagatgggcg gcctgaacat cgacgagctg atcgagaagg ccgacgggtt cgcgggggtg 180  
ttcccggagc acaagtacga gatcgtgaag cggctgcagg accggaagca catctgcggc 240  
atgaccgggg acggcgtgaa cgacgcgccg gcgctgaaga aggcggacat cggcatcgcg 300  
gtggacgacg 310



<210> 2294  
 <211> 314  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-037-Q1-E1-F10

<400> 2294

gtgcaacaaa ccctaagacc cttgagggga aagccccagc tganggccac catctccaca 60  
 cccaaggttg cacctgagac cactaccatc cacattgagg ttgcgggcaa acatgcagta 120  
 gttgagaagg tggaggagga caaggaggag gactaacag tggcgggcaa acaagagcca 180  
 gcagccacca ttgagcctca gcagattgct agtgagggtga ccacttcgga agtggcggtc 240  
 gtcgttgctg agcctgagaa caaagaagag gaggaagttg tggagaagac cgtcatcgag 300  
 aaggagaagc catc 314

<210> 2295  
 <211> 404  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-F11

<400> 2295

cgggtcgacc aagcctccga acaagcctcc ggccaaaagg aaaggaactt agaaatcctc 60  
 caaatccttg attcaaataa aacaactcct cctccctccc ctcaataaca acccaaactt 120  
 gtaaccggca ggattctaac aaaaacttaa ttactttatg gacggattgg taggcctctt 180  
 gaaagtccgc gtgggtccggg gtatcaacct tgcctaccgc gacgcaagag gcagcgatcc 240  
 gtatgtcgtc ctacggcttg gcaagaagaa actgaagaca agcgtgaaga agagatccgt 300  
 gaaccccata tggcaagagg agctaactct gaccgtcaca gatcccagcc aaccactgaa 360  
 gctggaggtg ttcgacaagg acaccttcag cagagacgac ccca 404

<210> 2296  
 <211> 303  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-F9

<400> 2296

tgtgtttctc ttgcatgagg atcatcatcc tacatgggat caccagctcc tcttcacac 60  
gactcgccgg ggcgggatat acgaaaccat caatattatc atccaggatt cagtacatca 120  
cctgattcca catcatccgc agcttagatt ctaccctgct tttctgttcg cagctcaatt 180  
ccaatatccc aattgcatct caattcaatt caatcaattc tatcaatcgc atcctgccag 240  
gcatcatccc taccaactag gctcactaca ctttcaactca gattcgcttt tacttatcca 300  
acc 303

<210> 2297

<211> 408

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-G10

<400> 2297

ctgctcgccg gccaaaaatc gcctcatcaa caaccccccc ttcaaggctc cegtctcaat 60  
gggtctcttc tcaaacagga ttgggagga gagcctcaag gcgggggatc atatctactc 120  
ctgnagggcg gcgtgggtct acgcgcatca cggaatatat gtgggcgatg ataaggtgat 180  
ccatttcaca agaggaagag gacaggaggt cggaacagga actgtcgtcg atattattct 240  
tgtgagttcc accccaaaac gaagcaacac gccttgcccg gtgtgcaccg acgaaaccag 300  
cgacagcagc acagagacga acggcggtgt atcctcctgt ctgagctgct tcctaactgg 360  
gggtgctctc taccgtttcg agtacgcagt caaccggcg ctcttcct 408

<210> 2298

<211> 362

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-E3

<400> 2298

ccccagatt ggattcccc ccaaaaacaa caagggcctt ggcccccttc tttccgggct 60  
cgtccccgc cgttccttc ggcccccaa aggtgcaacc cggccaaca acacaacaac 120

tacaacggaa atggtcaacg ctagggcacc ttgtacggtc agcccaaacg gtgccggcgc 180  
 tcctgacaac ggcggtgcggt gcgggatcaa gaacgtgaac ctgccaccct acagcggcat 240  
 gacggcgtgc ggcaacgctn ccatcttcaa ggacggcaag ggctgcggct catgctacga 300  
 agtgagatgc aaggaaaaac ctgagtgtc gggcaatcca gtcacngtgt acatcactga 360  
 ca 362

<210> 2299  
 <211> 204  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B3

<400> 2299

gcgatccgta tgtcgctcta cgacttggca agaagaaact taagacgagc gtgaagaaga 60  
 gatctgtgaa ccccatctgg cagcaggagc taactctgac cgtcacagat ccagcctag 120  
 ctctgaaact ggaggtgttc cacaaggaca cgttcagcag ggacgaaccg atgggggacg 180  
 cgagatcga cgtggcgccg ctgg 204

<210> 2300  
 <211> 435  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B9

<400> 2300

gacgcgtatt acgcttccgg gctggttcgt ggatgccggc gccacagcct ctctgctgt 60  
 cgctgctggt cgccgtgcta gcgggtggccg ccgatgtcgc caacgccggc cagccaagc 120  
 ccctgacgcc tggcggggcgc gtggtacacc acaaccacgg caagttcacg gccgggccgt 180  
 ggaaaccgc ccacgcgacc ttctacggcg ggcgggacgg gtccggcacc acggcgggcg 240  
 cgtgcgggta caaggacacg cgcgcgagc ggtatggcgt gcagacggtg gccgtgagca 300  
 cgggtgctgtt cggtgacggc gcggcctgcg gcgggtgcta cgaggtgcgc tgcgtggaca 360  
 gccctagcgg gtgcaagccc agcgcggcga cactggtggt gacggcgacc gacctgtggc 420  
 cgccaacga acaac 435

<210> 2301  
 <211> 401  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-C11

<400> 2301

gcccaaccacg cctccggcca agcctccgca actaacttac caatggtgga accttggtcaa 60  
 tggtcacact cctccccggc tgccgtcccg gtcttggtgg cccggccggc gtctgcaggc 120  
 gggggagccg cggcggtggc ggagatctgc atgaagactc cgtccccga cctgtgcacc 180  
 aggacggcgg ggaagcacgc caacaagtac aaggtggtgg acgcggtgac ggtgctagag 240  
 atgcaggtgg acgcgttcaa gaagcgcgtg aaggcggcgc ggaggctcgc caaggaggag 300  
 gtcaagacgg ccgcgacgcc cgaggcgcgg agggcgctga acctctgcaa gacctactac 360  
 ctggacgccg ccgacaacct cggcgctcgc aagcgcgccca t 401

<210> 2302  
 <211> 425  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-H9

<400> 2302

gtcgatgacg cctctagagt caatctgcat aatcgccggc accacgaacg gcttgcgcat 60  
 caagtcgtac gaggactcca agtcgtcgct caaggccagc aagtctctgt acgagggcat 120  
 caccagggac aatgtctcct accccatcat catcgaccag aagtactgcc ccaacaacat 180  
 ctgcgtcaag tccggcgctt ccaaggtggc cgtcaacgac gtcgtcttca agaacatcca 240  
 cggcacctcc aacacgcggg agggcatcac gctcaactgc gccaacaacc tgccatgcca 300  
 gggcgtgcag ctgcgtcaacg tcgacatcaa gtacaatgga tccggcaaca agaccatggc 360  
 cgtctgcaag aacgccatct gcaagtccat cggcttgga aaggagctcg cctgcatctg 420  
 aacca 425

<210> 2303  
 <211> 412  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-A11

<400> 2303

acaccctaga ctgagtcgaa gtaacgtccc agctgatgac cctggtgaac aacatctcca 60

tcaggatctc caaccgggag ttccggccgg ggcactgcac gcactacttg aagcactcgg 120

ggctgctcat gaacgtgttc agcaacgcgt tcaacccgga catgagcccc cgccgggtacg 180

cgcacgtcga cgtcgacttc cgcaactcgg agcgggactg gtaccagttc aagtggcaga 240

ccacgtcgcc gccgtggtcc aagctgtgcg ccatgccggg gcgcgtgacg cgcgaggtgt 300

acggccagat gaccgtcgcg acgagcgtca acaaggggat ctactacttc atccagttcc 360

tggagcagct gcacgactga tccatcgtga gatagatcat caagttcaac ag 412

<210> 2304

<211> 296

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-A3

<400> 2304

caggcacagg tccagaagtc gcgggacgca gcaggccaca agtccgggtg attgaccag 60

cgacgacgcc gccgaactcg tcaaccccag gaaaggcacg ctccggcacg ccgtgaccg 120

ggcccgggcg ctgtggatca acttcgcgcg cgacattgtg attcaactct ggcaagaact 180

catcgtgaac agcgaaaaga ccatcgaacg gccgcgaacg caagtgcaca tcgttggcgc 240

gcagattacc ctgcagaacg tgcgcaacgt gatcctccac aacctgcacg tccacg 296

<210> 2305

<211> 383

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-B11

<400> 2305

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cttgtccagg atcaacaaca cggacatgga aatcaagggtg gaccgcctcg gcggaaccgaa 180  
caaggggtac ggcaacttca ccaacagcct ccccgccaac gagtgccgct acgcgatcta 240  
cgacctcgac ttcaccacca tcgagaactg ccagaagagc aagatcttct tcttctcctg 300  
gtccccctgac actgcacgca ccaggagcaa gatgctgtac gccagctcca aggacagggtt 360  
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<210> 2306

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B12

<400> 2306

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agattttggg gccccatta ataaaaacac aattgggttt taatccaatt ggcccaagtt 240  
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ctttgttgtg gtggacaaaa cagttgacta tggtcgaaga ggatcaccgt cagataaaag 360  
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<210> 2307

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-G2

<400> 2307

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aaaatatgtt gctgcccagt ccccttctcg gaaatcaagg ctgcaccctc atcaggaacc 180  
acagcagcag caaccacaag tgcaggtgga gctgcagcag caaccacaag tgcaggtgga 240  
gctgcagcag ccgcaaccac aaaaacaagc agcacctgtt atgcgcagag gagcatctat 300

tgctgctcgg caagcagcaa tggcacagca atctctggag actatacccg ttccatcttc 360  
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 <213> Zea mays  
 <223> Clone ID: LIB148-036-Q1-E1-G9  
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 tcctgcgtaa ccatgagcga gatcatgaag ctaaagcgtg ggatcagcac caaaccagga 180  
 gaccacctcg tccaaaatgg ccaacaacat ccatgtcacg aatgggagga gcaacagcgc 240  
 tactggccct cgccgcgggc gccgccggcg agcccgacgg agtcgcccag gaccccaggc 300  
 gggagccaga agaaggcgggt tctgggcaag gtgaagagca aggccaagaa atggatgcac 360  
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<210> 2309  
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 <213> Zea mays  
 <223> Clone ID: LIB148-036-Q1-E1-H12  
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 agcagcgggt catccgctca ggaaccacat tgataccggt cttttttcaa aactccatca 180  
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 act 243

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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-036-Q1-E1-H2  
  
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 acc 123

<210> 2311  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-036-Q1-E1-H3  
  
 <400> 2311  
  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-036-Q1-E1-H4  
  
 <400> 2312  
  
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 acctccttca ttcagaaccc tgtgttttgg aagggtatTT cacaatgaag cccaatcagt 180  
 tgattacatc ccatgttgat atacataggg tatacccata cgagttccaa ccagagtttt 240  
 caatgtctca tgatcttggg ttgaatttgt tttcacaagc cggtacagtg ctgggtactt 300  
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<210> 2313  
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 <212> DNA  
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cttttgcttt gtgttttttag gcggtaatat cagctgattt ttgagctgtt aaatagagaa  180
ctcgctgctc aatttttaac tctagtcttc aagaaggaag acgagttgag ttccgtataa  240
tcggtgaatt cacatccttt tgcgcgcggc ggctccacat gtgccatcat ctcatggcca  300
tggcgcaatg ttatgcagat gtagtgtgaa atccgaagaa cctaagcatt ctgctcatct  360
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<210> 2314  
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actgctatag gtacaagtag gatatacagg cagaaataat gcaggaccct cttctgccgt  180
gcaatccttt agtttttgca aggagagggg ggggataatg catagatgga caattgctac  240
ctggcaccat ttttcagcat atgtatagaa aggagctacc catttgaaac tgaaagtcgt  300
aggcattgtt taattaagtg cgctagaaat accccagccg cattcagctc tttttatata  360
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<210> 2315  
 <211> 431  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E7

<400> 2315

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 ggctgcatcg ccgctgctgt cttctccggc ttcattcatct acgacaccga caacctcatc 180  
 agggcttact cctacgacga gtacgtcgcc gccgccatcg agctctacct cgacatcatc 240  
 aacctcttcc aggccatcct agcggtgctc gaaggcgctg actgataggg tcatatatat 300  
 aacacggccg gctgaggctc atgggctgtg agcatatata cataggatca tatatatgca 360  
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<210> 2316  
 <211> 126  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-F11

<400> 2316

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 cgggaa 126

<210> 2317  
 <211> 223  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-F12

<400> 2317

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ggatgggagg catatatgta cgtgtgtgta atatattatt actacatctt gtactatatg 180  
cgacgattgc ttgactgatg aatcacgctt tttaggtag acc 223

<210> 2318  
<211> 453  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-F3

<400> 2318

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gagtcaggcgc tcttgggtgc gggcgaggcc gccgcgaacg cggcgggagg ggcgttcagg 180  
aactgggtgg cgatgaacca gcagagctac gcgctgtacg cgcagaagtc cgtcggggac 240  
gggggcaagg agcccttggc caagaagctg tcggaggcgg agaagaagaa gggtcacgtac 300  
gtgggtggacc ccagcggcaa gggcgactac accaacaatca ccgcggcgct ggaggatata 360  
ccggtgagca acaccaagcg cgtgatcctg gatctcaagc ccggcgctca gttccgcgag 420  
aagctgttcc tgaacatcag caaggcgttc atc 453

<210> 2319  
<211> 429  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-F4

<400> 2319

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taatttatca ctatgcataa ccaatatata agccatgggc aagcgcagcg tccctcggta 180  
ccctgaggac gaggacaaaag gcggctgctg cggctgcctg tgctgggtgct gctgcttcct 240  
gttggttcac gtggcgaggc tggccggcac ggccgcctac ttcttcttcg tgtacaagcc 300  
caaggcgagg tctactccg tgagcaacat gtccgtctcg cagttcgact tcagcacctc 360  
cgacctgacg ctgtacgtca agctcaccgc ctccgtgcgc gccgagaacc ccaacgagat 420

gatcaccat

429

<210> 2320

<211> 349

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-F6

<400> 2320

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atcgtcggcg ggcccacaaa gaacgacggc ttcgtggaca agcgcgcaa ctctctctac 180  
accgagccct gcacctacat caactccctc gccatcgggc cgctcgccgc gctcgccgctc 240  
cgaggcggtg agctcgtcgc cagcgagtga tctatcccca tgcgtgcgtg tgtgtcccg 300  
tgtttcgttt cttccctgac atgatatgat ttctactccg ttactgatg 349

<210> 2321

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-F7

<400> 2321

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acggcgccca gtaccccggc ggcggctacc ctgctccacc gggcggcggt gcgtaccctc 180  
ccgggcctgg gtacccggta ccacctggtg ggtacccgcc tccgggtggc taccctcagc 240  
ctggcgata cccgccgtcg cagggggcgt acccgccgcc ggggtgcaggc gcgtatcctc 300  
ccagcggtg ccccatcaa ccggtctacc cacagcctgg ctatccatcg atgcccggtc 360  
atggtggcat gtacggagga ggccacggtg cagggggctc tgcaggccac ggggcgatg 419

<210> 2322

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-F8

<400> 2322

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tccgtgcgta cgtgtgtgca gcgagcagct agggcatatg cattatttca gaagagaact 180  
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agagacggtg atgagttggc ggaagatcga tgcattgcgtg gatgatcacc acagccaatc 300  
gtacgtgtgt aaaaggctcg cgggagggga ataatcgtgc atgagacacc tctctcgctc 360  
gctcttcttc tctacgtct taattcattg ggttcgtcga tccgagatcc tacgtacgtc 420  
gtcgtttttg t 431

<210> 2323

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-F9

<400> 2323

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ggcctcggc cttgcgcccc agccgctacg ccctcaaggc cttcgacaag cgctccgccc 120  
cccgcagcag gaagcctgac gccgaccgcc gcgcgcggtg ggagatcagc gtgctctccc 180  
gccttgcgca cccgcacctc ccctcgctcc tcggcttcac cgagacggac gaccttctcg 240  
cgtgggccgt cccctactgc tccggcggcg acctcaacga gctccgctac tcgctccccg 300  
accgcatctt ccccccgcg gccatccgct tctacattgc cgagatcgtc tccgcggtcg 360  
ccgagctcca cgcgcggggc gtcgtgtacc gcgacctcaa gcccgagaac gtgctcctcc 420  
gcgccgacg 429

<210> 2324

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D11

<400> 2324

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tgctgcttct ggttgggtgtt gcgcaggcgg tagtggagtt ggtgcctgct gatgataata 180  
tcgccgccgc cgctgctggc acggcgggtgg acgatggcga gccgcctcag cagtgcgcga 240  
ccccggtgag cgtggaggag gcgtgccgcg gcgcgtccga gacgcacgcc ggcgtggcct 300  
acgaccactg catggcgctg ctgggcgccg acccgcgag caaggaggcc ggcaacaaga 360  
acatgcacgg gctggcgggtg ctggccacca ggatggccat cgaccacgcc gccagaccg 420

<210> 2325

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D12

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gctggtctac gacgacatca ggagcacgta caggagatc gagccccgga gcgtcatccc 180  
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gctggagaag gacggcgaga tcccggtgcc gtacaggccc gacgtcagcg tcgacaggat 300  
caagtctgag cagttctct tgcaggagtc caccgcgacg cttcacctga gcctggacaa 360  
caggaacgcc ttcgacctgg ggctcaactc catggactac gaggtgtggc tcggcggcgt 420  
gagcatcgcg tccgctg 437

<210> 2326

<211> 455

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D4

<400> 2326

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acggccgacg gcgccatcta ccataagaca tgcttcaagt gcagccactg caaaggggtc 180  
ctctcgatgt gcagctactc ctccatggac ggtgtgctgt actgcaagac ccacttcgag 240  
cagctcttca aggagaccgg gagcttctcc aagaacttca cgccaggtgg caagtcatca 300  
gacaaggggtg aactgacaag ggccccaagc aagctgtcgt ctgcattttc tggtagccag 360  
gataagtgcg cagcatgcca gaaaacagtg taccgctgg agaagttaac tctggaaggc 420  
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<210> 2327

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D7

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gcggtggcgg agatctgcat gaagactccg tccccgacc tgtgcaccag gacggcgggg 180  
aagcacgcca acaagtacaa ggtggtggac gcggtgacgg tgctagagat gcaggtggac 240  
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gcgacgcccg aggcgcggag ggcgctgaac ctctgcaaga cctactacct ggacgccgcc 360  
gacaacctcg gcgcctgcaa gcgcgccatc ggcttcgcgg acgccgtcac catccgcgcc 420  
acgatgagca tg 432

<210> 2328

<211> 186

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E11

<400> 2328

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tcgggggttg ttgggctggg ggggtctaggc tcgggtctcag gggtcctggg cgtactcggt 120

gggactagtg gtactgtggg ggggggggtg ggcgacgcta agcgccgtgt ggctgacgca 180  
ttaggc 186

<210> 2329  
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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E2

<400> 2329

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ccacgcaaag gcgccgagcg tgatctccgt ccgtgcgcgc atggcctcgc accgggcgct 180  
gctgctgctg ctctctgcgc ccgcgctcgt cgctgcgctg gcctctgtcg catccgccga 240  
cgacgccatc gccatgceca tcctcctgac ccccgtagcg cataccccgc tggggtcctt 300  
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tgtcggcgcg cccaacgggg ccaccatgac tgagcccaag gacgacgtcc ccgccgcgcc 420  
cg 422

<210> 2330  
<211> 429  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E3

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cgacgacttc accgtcccgg gggaagcctc cattgccacg tccggcaagt cggtcgagtc 180  
cctgtgcgcg cccacgttgt acaaggagtc gtgtgagaag acgctctccc aggccaccaa 240  
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gaaaacagcg gtcgagcagt ccaagacgat cggcgaggct aaggccagcg actccatgac 360  
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catgctcga

429

<210> 2331

<211> 428

<212> DNA

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<223> Clone ID: LIB148-036-Q1-E1-B7

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aacatcctgt atgggtactct aatggaggtc tgcacaccag ctacatgccc aacaatgtca 180  
gctggaccaa agtttgagta tagatggggc gatgggggtc agatcaagaa accaattgag 240  
gtttcagcac caaagtatgt tgagtacttg atggattgga tcgaagctca gcttgatgac 300  
gaatccatct tccctcagaa actcggaacc ccttttccac aaaatttcaa ggaagttgtg 360  
aagacaatct ttaagcgact tttcgtggt tatgctcata tttaccactc acattttcaa 420  
aagattgt 428

<210> 2332

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B9

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cagcgctggc tgccgacgcc aatacaccga gcagagcgtt cagcacctga ttaccgatca 180  
accatgagtg ctcaacacta gtaccacaga agtccgtctc agatcgtagg taggagcccc 240  
ttcactacag actgtctcga agcgcaacat cgagagtcac atgattgatg aagtcacaa 300  
gcacagggta atagaccaat atctctgccg cgctaaagga tatcccggtg agcaacacca 360  
atcgctgat gttgcatttc aagacctgaa cttacttacg ctaaaaggta 410

<210> 2333  
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 <212> DNA  
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<223> Clone ID: LIB148-036-Q1-E1-C10

<400> 2333

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 ttgagggcat caaggcaaca gggcgggtgca acctgttcct cgtcggacag ggcacgccct 120  
 gcatgccgct ggttgactgg agcacggaca gcccgagct cgggccggtg ggtacttacc 180  
 tggcgctgcc ggaattctcg acggtggcat ctgtgctggt catgaaacag tacgatccga 240  
 tggcgaagca cgacgacttc gtcgaggagg tggccgacat agcgggtggac gttgacacgc 300  
 cgggccccag taaccgggga aacaatacta gtttccatgc cggatgatac gtgctggtgt 360  
 tagatgtatt attaacatgt cgagcagaca agactgatta acattatg 408

<210> 2334  
 <211> 430  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C4

<400> 2334

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 aatcttctaa agaattgtcg agaggactac ttcacagctc tgcaaagtgc acctgcccc 120  
 gtataatgaa gaaactgata aatatctaaa agggaaacatg caaatcaagg tgtaaattctt 180  
 aacagtgcca gaaatctggc agttttgggt gaggagattc tacctgccat ttttcggttt 240  
 gtacatagga gcctgtaaca tttgtggttt tttttatatg ggccaggata gaacttctcc 300  
 attgtttggt caaggcaagc agaattatcg cctgcatgtt gtattttgta taaatgttca 360  
 tcctttaact aaaactcaga agtgaagatt gatataaaga aagaaaagag gaagaccagg 420  
 gaggagggga 430

<210> 2335  
 <211> 437  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C6

<400> 2335

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ttggacaccg ccaccgacct gacgtggatc aactgtcgtc tgcggcgccg caagggcaag 120  
cactatgggc gacagtcatg ggggcagacg atgtcgggtg gcggggaagg cgcgacggcg 180  
gcgaagaagg aggcgagcaa gaactggtac cggccggcca agtcgtcgtc gtggcgccagg 240  
atccggtgct cgcagaagga gtgcgcggtg ctgccctaca acacgtgccg gagccccagc 300  
aaggcagagt cgtgcagcta cttccagaag acgcaggacg gcacggtgac gatcggcatc 360  
tatggcaagg agaaggcgac ggtgacggtg tcggacgggc ggatggccaa gctccccggt 420  
ctcatcctgg gctgctc 437

<210> 2336

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C9

<400> 2336

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ctggtggcga cgtgcatcgc cgtgtacgcc aactgggagt tctgcaagat gcagggcatc 120  
ggctggggct ggggcggcgc catctgggcg ttcagcgtcg tcacctactt cccgctggac 180  
gtgctcaagt tcgccatccg ctacgcgctc tccggcaagg cctggaacaa catcaacaac 240  
aagacggcct tcaccaaccg caccgactac ggcaagggcg agcgagaggc gcagtgggcc 300  
acggcacaga ggacgtgca cggcctcaac caggccaccg ccacctccga cctcttcggc 360  
gacaaccagg gctaccgcga gctgtcggag ctcgccgag 399

<210> 2337

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B2

<400> 2337

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gcacccggtt cagccgcacc aagggtccaga cgtctataaa aggagcccag gtcactaggg 120  
tttagttttg acgccccacc ccggtgcaca agcgggggacg agtaccgaga ggagcacgac 180  
gatggcggtt cccaaggggc gcgcacgacg gctcccccaa gcgcacgacg gtgacggttc 240  
ctgaggtgca catgtggtgg ctgctctcca aggcgcacgt tggcgacggt tcccaagagg 300  
cgcgcgcggc tggctctcag gaggcacgaa tagcggcggt ggccagaagc atgcacaggc 360  
agcaacacct ccctgttggt agtgtgacag taagggcctc tacctcaaac tatttttcgag 420  
ctccgacgaa tcggacgcca 440

<210> 2338  
<211> 407  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-035-Q1-E1-H9  
<400> 2338

ggtcgatgca cgctctaca atggctcgca tcagcagtgc ggcgatgaag gcagccgtgg 60  
ccgctctgct ggtgttcgcc gcggtgtcgc ctgccgcgcg cgcggtggcg gcggaggcgg 120  
aggcgaaggc gaaggctgtg ggaggcgcg cgtcgggtgcc cgctggctcg ctggacatcg 180  
cgcagctggg cgccaagggc gacggcaagt cggacagcac cccgatgggt ctcaaggcgt 240  
ggaagcacgc gtgcgaggcg acggggcagc agaagatcgt catccccaag ggcaactacc 300  
tgacggggcg gctggacctg gtggggccct gcaagtctc catcatcatc cgctcgcagc 360  
gcaacctgct cggcaccggc gaactcaacg cgtacaagag gaactgg 407

<210> 2339  
<211> 382  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-036-Q1-E1-A3  
<400> 2339

ctcgtgggtc attacaagac tctatagtgg tatccatgca gcggcatctc cctcatcgat 60  
gtcaacgtgg actacgccg cacgaacaac aaaacctgg tcgtctgcac caacgccaag 120

ggcaccgccca aggggaagcat ccaggcactg gcttgccctgg tctgatgatg accttccttt 180  
 tgcattgcatg catggtatct catccttgat gatgatctag ctcattactt ctttttaatt 240  
 tcggcttcat tcgcttttcc aaattcgatt gtgtttcagc caagttgttt aacgggacat 300  
 ctcttgatcat atcttcctgc tacatagact tggactccta tatatacagg ccttcacagca 360  
 catataacat acgtcggacc aa 382

<210> 2340

<211> 406

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-A5

<400> 2340

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 ctcccccgcc ggccaacaac tcagccgccg caaccgccac atcagccatg ggcgcctgcg 120  
 caaccaagcc caagacgctt gaggggcagg cccagctga ggccgccgtc tccacaccca 180  
 aggttgcgcc cgaggccact ccaatctccg ttgaggttgc ggctgatgaa caggtagctg 240  
 agaaggtggt ggtggaggag ccggtcgcg cgcccgacgt tgagcatcag aaggctaatt 300  
 aggtggtcgc tccagaggcg gccgtcgccg agcccgatca caaggaggag gaagccgtgg 360  
 agaagaccgt cgtcgaggag gagaagccag cggcagccgc caatgc 406

<210> 2341

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-A6

<400> 2341

ctcgcgggtc gacacacgcc tctagacgca gtcggagaaa gcggacggcg agctaccctt 60  
 cggacacgac gccgtcacgt tttccttctt ggtggcgtgc gtggccgcca gcgtcgcgct 120  
 cgcgtcgctc atgtgatcgg cgtgcgaccg caagccaaag gcggccacca aagcggaccc 180  
 ggctgggacg gccatcatga tctccggtgg tagcggcagc catgaagctg gcgcagagga 240  
 agcagcggta gaggaggaag tggtagaggct gtcgccggag ctggcgatgc acggcgccat 300

cgagccggtg gcgctgccgt cgctgacgtc gaggcggcgg ctgtccatca acgtgagcaa 360  
gaagctgata ctgaatatct cggacaagct ggggctgacc cggcaggagc acaacga 417

<210> 2342  
<211> 438  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-036-Q1-E1-A9  
  
<400> 2342

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acaagacaga agaatactcc catgacgcc acaacaaatt caacatttac cctgagcaaa 120  
tcccttctctg gcttggtgac tggattcctg agaaaggagg ttacctata gggaatctgc 180  
agccagctca catggatttt aggttcttct ctcttggtgaa cctttggggc atagcttcgt 240  
ctctaactac tccaaaacaa gctgagggaa ttcttagcct tattgaagaa aaatgggatg 300  
atcttgtagc aaacatgccc ctgaagatat gcttccctgc aatggaagat gatgaatggc 360  
gcattattac tggcagtgat cctaaaaata ccccatgggc atatcataat ggtggatcnt 420  
ggccaacctt attgtggc 438

<210> 2343  
<211> 420  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-036-Q1-E1-B10  
  
<400> 2343

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tgggtgtcgt ccttgacagc ctcgtcgccg gcggtgcatg cgggcccccg aaagtgccgc 120  
ccggtcccaa catcaccacc aactacaacg gcaagtggct caccgccagg gccacctggt 180  
acggtcagcc caacggtgcc ggcgtcctg acaacggcgg tgcgtgcggg atcaagaacg 240  
tgaacctgcc accctacagc ggcattgacg cgtgcggcaa cgtccccatc ttcaaggacg 300  
gcaagggtc cggctcatgc tacgaggtga gatgcaagga aaaacctgag tgctcgggca 360

atccagtcac ggtgtacatc actgacatga actacgagcc tatcgctccc taccacttcg 420

<210> 2344

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B11

<400> 2344

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ctggacgtgc acgtcggcca ctgcctctcc gtgctggctg acgccgacca ggcgcccggc 120

gactactaca tgggtggcctc cacgcgggtc atccacgacg ccaagtcgcg ctccgccgtc 180

atccgctacg ccgggtccag cggcgccccg ccggcgccca acatgaccga gccaccggcc 240

ggctgggcct ggtccatcaa ccaggccagg tcgttccgct ggaacctgac ggccagcgcc 300

gcgcgcccc aaccgcaggg ctctaccac tacggccaga tcaacatcac ccgcaccatc 360

aaggtcatgg tctcccgcg ccacatcgac ggcaagctcc gcta 404

<210> 2345

<211> 436

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-035-Q1-E1-H4

<400> 2345

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cctcgattcc ggcgacgacc ttccgctca tcttatccgt cctcttctgt gccgcggctg 120

gcaccgccgt cgacaacgac ctccccgact acgtcatcca gggccgcgctc tattgcgaca 180

cctgccgcgc cgggttcgtg accaatgtca ccgagtacat cgcggggcgcc aaggtgaggc 240

tggagtgcaa gcacttcggc accggcaccg acgggaacgg cacgtacacg atcgagctca 300

aggacagcca cgaggaggac atctgcgagg tggctcttgg ggagagcccc cgcaaggact 360

gcgaccaggt gcaggcggac agggaaacgc ccggcgctct gctcnacang aacgtcggca 420

tcagcgacaa cctgcg 436

<210> 2346  
 <211> 450  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-035-Q1-E1-G4  
  
 <400> 2346  
  
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 cctcgaggct gccgtcgagg tcctggccgc gcggccggcg tctgcaggcg ggggagccgc 120  
 ggcggtggcg gagatctgca tgaagactcc gtccccgcac ctgtgcacca ggacggcggg 180  
 gaagcacgcc aacaagtaca aggtgggtgga cgcggtgacg gtgctagaga tgcaggtgga 240  
 cgcgttcaag aagcgcgtga aggcggcgcg gaggtcgcgc aaggaggagg tcaagacggc 300  
 cgcgacgccc gaggcgcgga gggcgctgaa cctctgcaag acctactacc tggacgcgcgc 360  
 cgacaacctc ggcgcctgca agcgcgccat cggcttccgc gacgcccgtc acatcggcgc 420  
 cacgatgagc atggtggcgc aggacacgca 450

<210> 2347  
 <211> 441  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-035-Q1-E1-G5  
  
 <400> 2347  
  
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 cagcctgcat cggtcgacga gggctgcacg aacgatgggg tccgcctccg cctcagtgc 120  
 gacaaccagc ctgctggcgc tggcgctggc agcgtggtt ttcgtctcca gggccgcggc 180  
 gcagggcaac ggctgttcca gcgtgatgat gacctggcc ccgtgcatgg acttcatctc 240  
 cagcaaggcg tcggagccgg ggatctcctg ctgctcggtg ctggccggag tcgtgcagac 300  
 cgacccccgc tgctctgca tgggtactgga cggcactgcc acgtccttcg gcacgcgccat 360  
 caaccagacc agggcgctgg agtccccgg cgtctgcaag gtcaaggcgc cgccgctcag 420  
 ccagtgcaca ggcgtccctg c 441

<210> 2348  
 <211> 433



<212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-035-Q1-E1-G6  
  
 <400> 2348  
  
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 ggactgcgac caggtgcagg cggacaggga ccgcgccggc gtcctgctca ccaggaacgt 120  
 cggcatcagc gacaacctgc gccccgcaa cccgctcggc tacctcaagg acgtgccgct 180  
 gcccatctgc gctcgtctgc tcaaacagtt ggactcggac gacgacgacg atcagtaata 240  
 gcacatcgac gacgacgac gatatgtaat agcacgtcgt cgacgaccga ccgcagtcgt 300  
 cgcagactgg ctggcactaa accacaaatc ctcttcacct ggattacaaa tatgtaactg 360  
 agaaaggaaa ggaaaacaaa aatgtaactg cgtggctgtn acaaattctg agtgctggat 420  
 tcttgctatt gtc 433

<210> 2349  
 <211> 415  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-035-Q1-E1-G7  
  
 <400> 2349  
  
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 gccagcaggt tcagccgttc ctgttcttgc taaaacgaga gaaggatggc agtgtctcag 120  
 ggagctgtcc tattcttggt tctcctcgtc gcagcagagg tgggaaccat cgatgccaaa 180  
 atgggagtag ccatgcccat gcatgccttg ataatggaga aagcgaaaca gcaggagacg 240  
 gagaagaagg aggagaaaag cacggagaag gaagagagtc aatgcttata gccgagtctc 300  
 cagttcgagg gcttctgctt caacagcgac agatgcgccg atgtgtgcat gaaggagagc 360  
 tttcccggtg gcgagtgcaa gcaggctgtg gccacgcgca agtgcttctg caaga 415

<210> 2350  
 <211> 456  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-G8

<400> 2350

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gaggaagccg atccgcgggc actgccggca cagtggacca ccgcgaagaa gtacaaggcc 180  
acgatggacg ccaagacgcg gcaggctttc gacggcgtgg tggccgcccgc tacggcagag 240  
aagcgggtccc aggcgggtgga ggccgtgctg cagcagcagc tgaacatgga cgtgtccctg 300  
tccaaggcga cgtcttccgg ggacgagaac aactacgtga gcgtggcccgc cgcctacgag 360  
aaggccgcgg gcgccgtcat cgccggcgacg ccggacaaca agctccgcgc tatggcggtc 420  
gcgttcgacg gcgcgggtggc gccggacccg ggccgg 456

<210> 2351

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-G9

<400> 2351

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ctcaacatct tcaagccgcg gaacgagcac gactacttcc acaacgcgaa ccaggaggag 120  
gatgtgatgc cccggggccag cgaccagcag aacctcataa cggcgccggt gaccaagagc 180  
ggcctcatga aggtgccgcc ccggtccgcg cccaccgcgg ttgcgcagga cacggtggtg 240  
ctccccgtgg acaacgcgcg ggggttcccc ggcgcttggt ccatcatcag cgagaacgcg 300  
ggcgtgtccg cgatgcacct ggtgatcatg cggagcgaca aggccatcat gttcgacacg 360  
gtcaccacgg ggccgtcgct gctgcggctg cccaagggga actgccgcct cga 413

<210> 2352

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-H1

<400> 2352

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 gcgacgacaa ggacatgac gccagcgagg ggaccgccgc gcccgggccc ccctcgatgat 180  
 gaggaggagg tgggtggggcg acacgtccag acatccgagt cggtcgctgt agtcggggat 240  
 ggccctgtcg cccgccctgc agcccatcac agcgagggtg ccgtgccgc tgctaggatt 300  
 ggtgtgtgtg tgccgtgtgc gtgtccgtgt gtgcattctt tgggggtgtg taacgtgatg 360  
 tgatgtaaag agaagaggaa ctgcatcggg ttgggttggg ttggt 405

<210> 2353  
 <211> 407  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-035-Q1-E1-H10  
 <400> 2353

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 ccacgcccc ttccaggctc ccgtctccat ggggtctctc tcaaacagga ttgggagggg 120  
 gagcctcaag gcgggggac atactactc ctggagggcg gcgtgggtct acgcgcatca 180  
 cggaatatat gtggcgatg ataagtgat ccatttcaca agaggaagag gacaggaggt 240  
 cggaacagga actgtcgctg atattattct tgtgagttcc accccaaaac gaagcaacac 300  
 gccttgcccc gtgtgcaccg acgaaaccag cgacagcagc acagagacga acggcggtgg 360  
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<210> 2354  
 <211> 433  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-035-Q1-E1-H11  
 <400> 2354

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 agcaggtctg acaggatgtc gtggcagaca tacgtcgatg agcacctcat gtgcgagatc 120  
 gagggccacc acctgacctc cgctgccata gtcggccacg acggcgccgt ttgggcccag 180

agcaccgcat tcccacagtt caagacagag gagatgacca acatcatgaa ggacttcgac 240  
gagcccgggt tccctggcccc gaccggcctc ttcctcggcc ccaccaagta catggtcate 300  
caaggcgagc cgggcgctgt catccgcggg aagaaggat ctggaggcat aactgtgaag 360  
aagacagggc aagcgatggt ggtcggcatc tacgacgagc ccatgacccc cgggcagtgc 420  
aacatggggg ggc 433

<210> 2355  
<211> 384  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-H2

<400> 2355

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tggtggctgt caaggttatg gtggtacaat gattgcacct gacctctgc gacgccctca 180  
cccacaccag cgacccctac gtcttctctc gcctcggaca gcagacagtc gcatcaagtc 240  
tgtcataccc catgatgat ctgctgcagg acgagctgct catgctgttg tcccagtcca 300  
tggtgacgtc gtccggggat gagcactact acctgagcat ggccaccgcc tacgagaacg 360  
ccgcgggcgc cgtcatcgcg gcga 384

<210> 2356  
<211> 446  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-E6

<400> 2356

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tcgcgcagc tctctgcaga tttctacaag acgtcgtgcc ccgacgccga gaagatcate 180  
ttgggcgtcg tcgagaagcg gttcaaggcg gaccccgga ccgcgcccg cctcctccgc 240  
ctcgtcttcc acgactgctt cgcaaacggc tgcgacgct ccatcttgat cgaccccatg 300

tccaaccagg cctccgagaa ggaggcgggc cccaacatct ccgtcaaggg ctacgacgtg 360  
atcgaggaga tcaagacgga gctggagaag gagggtccca acgtgggtgtc gtgcgcggac 420  
atcatccccg gtaacgcccgg cgactc 446

<210> 2357  
<211> 406  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-035-Q1-E1-E8  
<400> 2357

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agataaataa agatgaagaa agtggcatca tcgtcagccg ttctcttcgt gctagccctg 120  
acgctagttt gtgccccgct gatagcagag gcaaagaaga agagagtcgc cgccgccgcc 180  
gccgaggaga agaaggtgca ggacaacttc tgctcgacgc tgtgagaggg caggaagggg 240  
atggacctgg tgggtgtgca ggagtcctgc gacctctcac agcgctccaa cctgggtgctg 300  
tacggccgga tccagtgcaa gggcaagtgc accgagcaga agggcatcac cgcgccgcag 360  
atgaaggtgt gccaaagggc gtgcgacaag gactacgtgg tcaaag 406

<210> 2358  
<211> 385  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-035-Q1-E1-E9  
<400> 2358

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cttgtcccgc cttgccgctg cccgccgtcc ccgcctcgct cgcaagtcga tttcccgcag 120  
cgatgttgga cagctactag cactcggaca cattgatcgt gctctccacc gtgcagagca 180  
gctcatagag gaggacaaca tgctggaggc gttcaacata atagagctac actgcaatcg 240  
cctcattgag tgcgcaaagc agctagacaa gcccattgaa tgtgggtgatg acattcggga 300  
ggcagccgcc gggatcatgt ttgcagctgg gaggtgcggc gacctgccgg agctgacgtt 360  
tgcacgaacc atactgacaa acaag 385

<210> 2359  
 <211> 405  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-F11

<400> 2359

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gagagccagc gagcagtctc tcgtgcagtg cagtgcagtg cagtgcagct ccggcgtaga 240
tgagattgta ttgtgaccaa gccgggaggg aaagcagggg ggggaggaca aagatgtttt 300
gtcacgtttc aggctccggc catcgccgga gtttgtccgg ggaatatatc gatttcctat 360
tagaaatccg caaaaaaaaaa ggaagaagaa agagaggaag agtat 405
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<210> 2360  
 <211> 456  
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 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-F2

<400> 2360

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cgatgcgaaa gcgtccgggc ctggtgggtc cttcgacatc accaagttag gcgcctccgg 180
caatggcaag acagacagca cgaaggctgt gcaggaggca tgggcatcgg cgtgcggcgg 240
cactgggaag cagacaatcc tcatacccaa gggcgacttc cttgtcggac aactcaactt 300
cacaggccct tgcaagggcg acgtgaccat ccaggtggat ggcaatctgc tggcgaccac 360
ggacctaagc cagtacaagg accatggtaa ttggatcgag attctacgcg tggaaaaacc 420
tggtcatcac cggcaaggga aaccttgacg ggcagc 456
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<210> 2361  
 <211> 418  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-F6

<400> 2361

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cggcgagaag gagaaggaga aggagcagga gatggagaag gcggtcgcgg cggagaaggc 180  
tgcccagcag gagctgctca agtacgcaa ggagaagggc atcgtgtcac cgaccaacgg 240  
cacggggtgg tacaagggca tcgcccggga gttcgtggac gccacaacg agctccgcgc 300  
gcgctacggc gtgccgcca tgaagtggga caggaagctg gcgcggcagg cgcggcgctg 360  
gtccaaccgc atgcgcaagg actgcgagct cgtccacagc ggccacaagt acggcgag 418

<210> 2362

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-F7

<400> 2362

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acacgtacat tcaccggcg gcaataatgg cctcggttcc ggctccggcg acgacgaccg 180  
ccgccgtcat cctatgccta tgcgtcgtcc tctcctgtgc cgcggtgac gaccgaacc 240  
tccccgacta cgtcatccag ggccgcgtgt actgcgacac ctgccgcgcc gggttcgtga 300  
ccaacgtcac cgagtacatc gcgggcgcca aggtgaggct ggagtgaag cacttcggca 360  
ccggcaagct cgagcgcgcc atcgacgggg tcaccgacgc gaccggcacc tacacgatcg 420  
agctc 425

<210> 2363

<211> 451

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-F8

<400> 2363

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caaggacgag aaggacgtca cggacatcaa cgtcaaggat tgcactctta agaagacgat 180

gttcggcgtc cgcacaaagg cgtacgagga cgcgcctcc gtgctcaccg tctccaagat 240

ccactacgag aatatcaaga tggaggactc agccaacccc atcttcatcg acatgaagta 300

ctgccccaac aagttgtgta ctgccaacgg cgcctccaag gtcaccgtca aggacgtcac 360

cttcaagaac atcaccggca cctcctccac cccggaggcc gttagcctgc tctgcactgc 420

caaggggtccc atgcaccgcc gtcacaatgg a 451

<210> 2364

<211> 406

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-C9

<400> 2364

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ccgccgccgc cgccacaagc gaccgcgcac ccgctcttct cctcctcttc gctctcggcg 120

gccggcgatg ggggagaccg tacgggcggg cgacgttgca atcacgactc acgagatgga 180

gagccacaac ccacgcact ctcagatcgc cgaagtgcg atggacatcg cagcgtcagc 240

ttctggagcg gcagggagca agttctgcaa gggcgcagcc tgcgacttct ccgacgccag 300

caactcctcg aaggacgccca gggagaggtc ggcgtcgatg aggaagctga tagtcgcggg 360

ggtcctctgc gtcgtattca tggcgggtgga ggtgggtggg ggcac 406

<210> 2365

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-D10

<400> 2365

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 tacgccgtgg cttccatctc cggattcgac ctccgcatcc cttcccacag cacccaagca 180  
 gaccacagca acggctgcaa cccctgctgg aacgccgtgg tacacttccc catcccggct 240  
 gccgctgaca cccgcggcct cgcactccac gtgaggctcc gcgccagcg tctatacctg 300  
 ggcgatcgcg acatcggcga ggtgtttgtg cccatcgacg acctcctggc cggcgccgac 360  
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 ca 422

<210> 2366  
 <211> 367  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-D11

<400> 2366

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 caaggcaaca acaatctgtt cggcccgcca aacaaaacc aaaaaaaaaa aacacactga 120  
 acccaataat ccgatccac agaaactttt ctctcggctc gttcgatcga tcgctgccgt 180  
 gtcgtttgcc agacaccatc agcacccaaa accatggcct gcaacctggc tcagtgcgcc 240  
 accgccgccc cggcgaccgt cgcgccccgc accctcgcc ctgctgcgtc cgcgtccgtc 300  
 tccttctccg cgaggaagcc ggcgggcggc agcctgcggc tgcagcggca ggcgtgctgc 360  
 gagccgt 367

<210> 2367  
 <211> 414  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-D12

<400> 2367

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 atccctcgct aataacatca tggctgtggg cgcgctcctt gcggcgcttg tcgtcggcgg 120  
 gtcgtgcggg cccccgaagg tgccgcccgg ccccaacatc accaccaact acaacggcaa 180

gtggctcacc gccagggcca cctggtacgg tcagcccaac ggtgccggcg ctctgacaa 240  
 cggcggtgcg tgcgggatca agaactgaa cctgccaccc tacagcggca tgacggcgtg 300  
 cggcaacgtc cccatcttca aggacggcaa gggctgtggc tcatgctacg aggtgagatg 360  
 caaggaaaaa cctgagtgtc cgggcaatcc agtcacgggtg ttcattcacag acat 414

<210> 2368  
 <211> 402  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-D3

<400> 2368

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 tcgtcgggtg ggtcgccacc gtcacccgct ccggcaagaa ggccggcgac aacttcacgg 180  
 tcccggggga ggcttccctt gccacgtccg gcaagtcggt caagtccctg tgcgcgcca 240  
 ccctatacaa ggagtcgtgc gagaagacac tgtcccaggc caccaatggc accgagaacc 300  
 ccaaggaggt gttccacagc gtggccaagg tggcgctgga gtcggtccag acggcggtcg 360  
 agcagtccaa gtcgatcggc gagggccaagg ccagcgactc ca 402

<210> 2369  
 <211> 409  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-D6

<400> 2369

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 cgagtgaag gtgaagttcc gggagctgaa gtcgcgcgcg agcttccggt tcatcgtgtt 180  
 caggatcgac gacacggaca tggagatcaa ggtggaccgc ctccggcgac cgaaccaggg 240  
 ctacggcgac ttcaccgaca gcctccccgc caacgagtgc cgctacgcga tctacgacct 300  
 cgacttcacc accatcgaga actgccagaa gagcaagatc ttctttcttct cctgggtcccc 360

tgacactgca cgcaccagga gcaagatgct gtacgccagc tccaaggac 409

<210> 2370

<211> 244

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-E12

<400> 2370

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ttcttaggcc gccctctaca cttctcgaca taaccatcga gagggcggtc gagagaaacg 120

agagcggcgg acaccatggg gagctcgagg accatcggtg cgtcccgctt gctcctctc 180

gccctcctcc tcttggtttt cgcggccacc gccgagcgcg gcgttggtccg cgagctgtcc 240

gggg 244

<210> 2371

<211> 384

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-E2

<400> 2371

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tcgccccggg gtcacgctc accaccgagc cccaaccaat taataatata tatatatagc 180

taggatcgat cgtcagtaaa atggcaggct ccgccgtcct gaggagcccc ctgtccgtcc 240

tctctacat cctcgccgcc gtgcccgcga ccgccgcggc gacgccgacc gacgccgcga 300

tcgacgaggg gtacgcgcat ctcgtcaacc tcaccgcgaa tcaggagtac tgggcggagc 360

gcgcggaggg ggcgcacgcg taca 384

<210> 2372

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-E4

<400> 2372

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tcctcctccg actcagcatg gtcgcgctcg tcctggctgc catcgccaca gtagtgctcg 120

cggaggaagc cgatccgcgg gcactgccgg cacagtggac caccgcgaag aagtacaagg 180

ccacgatgga cgccaagacg cggcaggctt tcgacggcgt ggtggccgcc gctacggcag 240

agaagcggtc ccaggcggtg gaggcgctgc tgcagcagca gctgaacatg gacgtgtccc 300

tgtccaaggc gacgtcttcc ggggacgaga acaactacgt gagcgtggcc gccgcctacg 360

agaaggccgc gggcgccgtc atcgcggcga cgccggacaa caagctccgc gctatgg 417

<210> 2373

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-B3

<400> 2373

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ggaagccgcc tccgtgtca tcgtctccaa gatccactac gagaatatca agatggagga 120

ctcagccaac cccatcttca tcgacatgaa gtactgcccc aacaagttgt gtactgccaa 180

cggcgctcc aaggtcatcg tcaaggacgt caccttcaag aacatcaccg gcacctctc 240

caccccgag gccgttagcc tgctctgcac tgccaaggtc gcatgcaccg gagtcaccat 300

ggatgacgtc aacgtcgagt atagcggcac caacaacaag accatggcta tatgcacgaa 360

cgccaagggc agcaccaagg gttgcctc 388

<210> 2374

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-B6

<400> 2374

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acgctagttt gtgccccgct gatagcagag gcaaagaaga agagagtcgc cgccgccgcc 180  
gccgaggaga agaaggtgca ggacaacttc tgctcgacgc tgtgcgaggg caggaagggg 240  
atggacctgg tgggtgtgcaa ggagtcctgc gacctctcac agcgctccaa cctgggtgctg 300  
tacggccgga tccagtgcaa gggcaagtgc accgagcaga agggcatcac cgcgccgcag 360  
atgaaggtgt gccaaagggc gtgcgacaag gactacgtgg tcaaggcggg ctgaggtcac 420  
aaggcctgca acaacaactg cgccaa 446

<210> 2375  
<211> 399  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
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aatggctgac ggcgaggaca tccagccctt tgtttgtgac aatggaactg gcatgggtcaa 180  
ggctgggttt gctgggtgac atgcgccaaag ggctgttttc ccaagcattg ttggacgccc 240  
acgtcacact ggcgtgatgg ttggcatggg gcagaaggat gcgtatgttg gcgatgaggc 300  
tcagtccaag aggggtatcc tgactttgaa gtacccgatc gaacatggca ttgtcaacaa 360  
ctgggatgat atggagaaga tctggcanca caccttcta 399

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<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-C10

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cttatccgtc ctcttctgtg ccgcggtggt caccgccgtc gacaacgacc tccccgacta 180  
cgtcatccag ggccgcgtct attgcgacac ctgccgcgcc gggttcgtga ccaatgtca 240

cgagtacatc gcgggcgcca aggtgaggct ggagtgcaag cacttcggca ccggcaagct 300  
 cgagcgctcc atcgacgggg tgaccgacgg gaacggcacg tacacgatcg agctcaagga 360  
 cagccacgag gaggacatct gcgaggtggt cttggtggag agccccgcg 408

<210> 2377  
 <211> 418  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-035-Q1-E1-C11  
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 gcaaggtttc tttgcgagtg gccggagaag atgatgggcg ggttcctctc cagggtcctc 180  
 ctgctggcctt ttggctatgc ctatcctgcc tatgaatgct acaagaccgt tgaactgaac 240  
 aaaccacaga ttgagcagct catattttgg tgtcagtatt ggattttagt tgccctgttg 300  
 acagttttgg agagatttgg agattttaca atatcatggc taccgtttta ctcagaagca 360  
 aagggtgttg tctttgtata tttgtggtac cctaagacaa agggaactac gtatgttt 418

<210> 2378  
 <211> 393  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-035-Q1-E1-C3  
 <400> 2378

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 ggcagcgaag gagcactttg tgcattgttc tgggtgaagg catggagcct ggtgctggat 180  
 caagctccgc tggctccttg aggggtgctg ctaccatgtt acatgcattg acctaatcgg 240  
 atgcggcgtc gatcctactg accccaacac aatccggtcg ttccagcagt acgataagcc 300  
 actcatatac ctcatttcaa ccttgccgga gggggagaag gtgattctaa tcggacatgg 360  
 tgctggatgg ctgactgtga ttcattgcaat gca 393

<210> 2379  
 <211> 454  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-C6

<400> 2379

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 gtctacccta cegtaccagc tagccaccac acgcgtagcg cgggaaatgc cggcggcggc 180  
 ggccatgacg acgaggcggg tgggtgctgga ggtgctacgg tcggcctccc gcgacgcctt 240  
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 caccaagccc ctctaccacc accaccacga caacgactaa tctggcgag atctacagca 360  
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<210> 2380  
 <211> 450  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-035-Q1-E1-B2

<400> 2380

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 cctcctcgt ctccgccgcy gccagtgcgc ggaccgtggg cgacaccgtg caggacgcgt 180  
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 agaaggcgac gccgcgcaag ctggcgagc tgttcgtgaa catcgcgcc gagaagggat 300  
 ccgggatggc caccttcgtg caccgcaagt acagcgacaa ggaggacagc gacatattca 360  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-034-Q1-E1-H8  
  
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 ggctctggac aggaacagga caggacctca aaatct 96

<210> 2382  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-034-Q1-E1-H9  
  
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 acgcccacga cggcgtgctg tcgctgggga acggcgacat gtccttcgcc gtccacgccg 240  
 ccaagecgtt cgggcagcgc ttctccttct gcctgctcag cgccaacagc tcccgcgacg 300  
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<210> 2383  
 <211> 383  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-035-Q1-E1-A10  
  
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 ccgcgtcggc gccgtgcacg acccgacag ccaggaggag gagggctcca gcgtcaccat 180  
 cgacgcgccc gccgcgcgc ccgacgacgt cggccacgac gacggcagcg actacaacga 240



ccccgacgtg cccaacaacg accagctcgt cgtcgtcggc cactgaaagc tgccgcgcgc 300  
 gcgcgcgcgc cgacccgtgg accatgcgtg catgaagaag aatgcagggg gtgggcctgg 360  
 gcctgtaacc tgttaatgga tcg 383

<210> 2384  
 <211> 412  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-035-Q1-E1-A11  
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 gcatggtgcg gtcctcccaa agtccccca ggcaagaaca tcacggccac ctatggcaag 180  
 gactggttgg acgctaaagc gacatggtat ggcaagccga cgggtgccgg tcccgacgac 240  
 aacggtggcg gctgcgggta caaggacgtg aacaagcccc ccttcaatag catgggcgca 300  
 tgcggcaaca tccccatctt caaggatggg ctgggttggtg ggtcctgctt cgagatcaag 360  
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<210> 2385  
 <211> 399  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
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 ataacgaagc aggatcaggc caagctggct gctcctcta tcgacagcat cgtgaacggc 180  
 agcgacgccg tcatggagcc ggttggtgct ggcagcaaca cggtagtagc tgttgcccaa 240  
 gttgagttgc aaacaatgaa cgtgcagcag cccgctgatg ttgccggacc cagcgagggg 300  
 gtggcggcga tctccaaagg ggggaaggta nggccgaacc ggtgcagcgc ctgcaggaag 360  
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<210> 2386  
 <211> 408  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-A9

<400> 2386

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ccgctccggt ttaattttctc ctogaccggc cagcgcaatt ctgtggctcg atcgatcggt 120
cggtcgtaag gcaagtgagc aagctatata tatatatagg agattcttcg agcgagctag 180
tagcgagatg ggttccgccg tcctctttta ctgcatctgc atcgccgctg tcgtcgcaatt 240
gtcgtcgtec atggtcgccg tcggggccgc cgccccgggg gaaaccccca agttcatctc 300
ggcgagcgcc cttgagtgtc ccgctaacgt aacggaaata gcaaaggcgc gcaagctgat 360
cgatgtccat ggccacgggc tgtgcccggg gcggttcgac cacacgcg 408
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<210> 2387  
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<223> Clone ID: LIB148-035-Q1-E1-B11

<400> 2387

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gtgggtttct tactgtgctt actggtactg ttgtactgca ttctacaaga gaacatgata 180
caacccttac ttcagatctg tatgtctctc tttccccaat atattggcat atccaaggta 240
acggtgaaac aggaggaaag ctgaaagagg atgatttact ctctggcaat ttcatactg 300
tggtgcgaca agactacttt gtctagagac cttccacgat gctcaatgtt ctggattaaa 360
agaaaagaga acaacactac ggaaggatcc tactgat 397
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<210> 2388  
 <211> 387  
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 <213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-H6

<400> 2388

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ctgcggcggc aaatagaaac cccaagtcag gcactgcaag tttaaggcgg agccgtggat 180  
ggacggggcac gctacgtact acggcggggcg cgacgggtta actgacacca cggactgcgg 240  
cacgtgcggc tacaagggcg agctggggaa agactacggc accctgacag cggccgtggg 300  
cccgtcgctg tacaccaacg gcaccgggtg ccgcgcgtgc tatgagctca agggcccaaa 360  
cggcacccgtt gttgtgacgg ccaccaa 387

<210> 2389

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-F2

<400> 2389

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gccgcgcgcg cggcggcggt ggccgtggca ggaggggcgc cgtcggtgcc ggcgggtccg 180  
ctggacatcg cgcagctggg cgccaagggc gacggcaagt cggacagcac cccgatgac 240  
ctcaaggcgt ggaagaacgc gtgcgaggcg acgggggtac agaagatcgt catccccgcc 300  
ggcaactacc tgacgggcgg gctggagctg aagggcccct gcaagtcctc catcatcatc 360  
cgtctcgacg gcaacctgct cggcacccggc gacctcagcg cgtaccagag gaactggatc 420  
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<210> 2390

<211> 369

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-G1

<400> 2390

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aggaacattt gagtggatca tgggggggatt ggtaggcctc ttgaaagtcg gggtaggtgag 180  
gggcatcaac cttgcctacc gcgacgcaag aggcagcgat ccgtatgtcg tcctacgact 240  
tggcaagaag aaacttaaga cgagcgtgaa gaagagatct gtgaaccca tctggcacga 300  
ggagctaact ctgaccgtca cagatcccag cctagctctg aagctggagg tgttcgacaa 360  
ggacacggt 369

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<211> 222  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-034-Q1-E1-G2

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caattcttga tgtcgtcac acaatgcatt atggaaaatt ttacatttt cctgttcttg 180  
acatggatgg aaatcttgtg actgtttttg atgttcttca ca 222

<210> 2392  
<211> 378  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
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gccacggcgt cgatcgggaa ggggcttacg tcgtgcgtgt gcgcgcaggg gacggagagc 180  
gacgggcgcc tctccttcga tttgagtccc attcaggaag agtgcttgca tangttgcag 240  
aaccgatag aggtgcagta tgatggttca aatctagagc atcagaaagc actggtgggc 300

ctttggcatg cttcttttcc tggaactgaa cttctaggat tagtatcaga ccaatgggag 360  
gagatgggat tgcaaggg 378

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<211> 415  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-034-Q1-E1-G6  
  
<400> 2393

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tgatggactc tgggatgttg tcaactaatga ggaagctgtt gccatggtca agcctattca 180  
ggacccccag gaagcagcaa acaagcttct cgaagaagcg tcccgaaggg gaagctctga 240  
taacatcacc gttgtcatcg tccgcttctt atatggaact accggtgata aatcaggcgc 300  
agacaaagag accaccaatg accaaaactc ctaattgcct cctgtaggga tccatcatgc 360  
gtgtgttttc ttctggctgt tgtatctgat gctcaaagta gatgctccgt gtgtc 415

<210> 2394  
<211> 413  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-034-Q1-E1-H10  
  
<400> 2394

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ttttgttttt tttttttttt tttttttttt tttttttttt tttttttttt gttttttttt 180  
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ttttttttatt attttttttt ttttttttat ttttttttgt cttttttttt tttttctgta 300  
tttttttttt ttgttttttt tttttttttt tttttttttt ttgttttttt tttctttttt 360  
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<210> 2395

<211> 107  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
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 gantcccaga agcatgacg gctgctgcac accacctgcc gcacccc 107

<210> 2396  
 <211> 173  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-034-Q1-E1-E9  
  
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<210> 2397  
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 <223> Clone ID: LIB148-034-Q1-E1-C9  
  
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 ggggtttcca cgttttttga aaggggaaag aggatgcgga ggagagggat ggggagggac 180  
 gagaggttcc cgtgtggga ggccgcgctc ggccgctgag tcgccgcgc cttcgccgct 240  
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 cgtaatc 307

<210> 2398  
 <211> 264

<212> DNA  
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 agacgatcac ataattaagc aaccgcaggc aataaataaa taaataaaac aacgattaat 180  
 taattattaa tcgggtgaac caaacacgat gctccatccc aggtttccag cactccgcgc 240  
 ggtacgtcgc tcagtcgagg aagg 264

<210> 2399  
 <211> 406  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-034-Q1-E1-B9  
  
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 ggcgacggca agtcggacag caccctgatg atcctcaagg cgtggaagaa cgcgtgcgag 240  
 gcgacggggg tacagaagat cgtcatcccg ccgggcaact acctgacggg cgggctggag 300  
 ctgaagggcc cctgcaagtc ctccatcatc atccgtctcg acggcaacct gctcggcacc 360  
 ggcgacctca gcgcgtacca aaggaaactg atcgagatcg agaacg 406

<210> 2400  
 <211> 276  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-034-Q1-E1-A3  
  
 <400> 2400  
  
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atgctgtatg ctctgggagaa cactggcatg acgtattcga ctggacactt tccacacggc 180  
atcaacgata tctacagtct ggtacagtcc acgatgactg ccaagcctaa cggaagcagt 240  
gttaagcaca gcaacatatc atccatcagt atgcgc 276

<210> 2401  
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<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-034-Q1-E1-B1  
<400> 2401

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tgaggggaaa gccccagctg aggccaccat ctccacaccc aaggttgacac ctgagaccac 180  
taccatccac attgaggttg cggcaaaaca tgcagtagtt gagaagggtg aggaggacaa 240  
ggaggaggca ctaacagtgg cggcgaaaca agagccagca gccaccattg agcctcagca 300  
gattgctagt gaggtgacca ctctcggaagt ggcggtcgtc 340

<210> 2402  
<211> 270  
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<223> Clone ID: LIB148-034-Q1-E1-B4  
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caccgaaggc aggtagtcct gccattgcac cggccgattc accgagtgca tgcactcctg 180  
cagctccttc caatgcaccc gagtctgctg ccactagaac tgcccccgct caggcatctc 240  
gagccgcctc caaccccggc gcttccgctg 270

<210> 2403  
<211> 411  
<212> DNA  
<213> Zea mays



<223> Clone ID: LIB148-034-Q1-E1-B7

<400> 2403

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cgaattcaag ttccctcaga taaaagccca tccatggcac aagctttttg gtaagcgcat 180  
gccacccgag gctgtcgatc tcgtgtcaag gctgctccag tactcaccga acctgcgctg 240  
cactgctgtc gacgcctgtg cccatccgtt ctctgatgag ctgcgggacc ccaaggcttg 300  
cctgccgaac ggacggccaa tgccaccgtt gttcgacttc acagcagccg aactcgaaag 360  
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<210> 2404

<211> 371

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-H12

<400> 2404

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ctccggcaac ttccggcgtt cccgcctcat gcgcgaccgc cgcaccaccg aactcgtcgc 180  
cgtcaagtac atcgagcgtg gcgagaagat agatgagaat gtccagcgcg aaataattaa 240  
ccatagatca ttgaaacacc ctaacattat taggtttaaa gaggttattt taacaccgac 300  
ccatcttgct attgtcatgg aatatgcctc tggcggtgag ctttttgaga gaatatgtaa 360  
gaacgtgcga t 371

<210> 2405

<211> 217

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-H3

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 acgggtacct caccatcgcg cgctcctgg cgcccca 217

<210> 2406  
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 <213> Zea mays  
 <223> Clone ID: LIB148-033-Q1-E1-H4  
 <400> 2406

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<210> 2407  
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 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-033-Q1-E1-H8  
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 agagtcaccg aaggcaggca gtcttgccaa ggcaccggcc gagtcaccga aggcaggcag 180  
 tctcgcagct cctgccaaagg caccgagtc tgctgccacg agaactgccc ccgctaaggc 240  
 acctcaagcc gcctccaccc ccgcgctgc cgctgcccca tcgtcgtcgt cgtctaagaa 300  
 gtctggtcca gctgcgcgc cgaccaccgc cgctctt 337

<210> 2408  
 <211> 429  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
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<400> 2408

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ctgtcattgc tcaggagctg cctcgacggt ggcaagaact ggcatctcgt gcagcagatc 180

cccgagggtgc gcatcataag ctgcgatggc aagagatact ttcggtataa caagagccgc 240

cgcactctacg aaactaatgc acagtcagaa gaatgaagcc atttctgaaa accttggcac 300

gacactgggtt tgttttgggt cagccacacg tttcagttgt cgctgtccct actttgttcc 360

gggagtattg agagcttgtg ttctgttcac gattgattca ngtgttttcc tttgggttgc 420

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<210> 2409

<211> 354

<212> DNA

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<223> Clone ID: LIB148-033-Q1-E1-F12

<400> 2409

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cgccagccat ggagatgaag aaggctctct gcgcgcacct cgtcgcccgc gcctcggcca 180

ccgccgtgct ggcctcggtc gectccgagg cgccctccga ggcgcccgc ggcgcggccg 240

gtagtgcagc tggctcctagc gtaagctgcg ccgcggctgc cgccgtgtcc accgcggggg 300

cactcgtcac ctcttcttc gectactaac tccagtgatc gacgacgcgc gggg 354

<210> 2410

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<212> DNA

<213> Zea mays

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<400> 2410

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caaggttcat aaattgcgtc acggtcgggg acggcgcctt cggcaagacc tgcattgctca 180  
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gtgccaaagt tgtggttgat ggtaatactg tcaacctcgg cctctgggac actgcaggtc 300  
aagaggatta caacagactg agaccactga gctatcgtgg agctgatgtt tttcttctgg 360  
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tga 423

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<211> 388  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-033-Q1-E1-D9

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<210> 2412  
<211> 389  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-033-Q1-E1-E10

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<210> 2413  
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 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
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 gggagaggca tgattttttg tcaacgaaca atgtcataga agaggtgttc gggaagggct 180  
 ccagtgaaga tggaagtgac actgctactg gccaggacct tatctgagcc agaggcggag 240  
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<210> 2414  
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 <213> Zea mays  
 <223> unsure at all n locations  
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 gctaattgatg ctttcgtatg atgcgcgcgc ggaaacaagc atgtgaangg tttcatgttt 180  
 gaaaaaccgg ttgatctgaa agtangtggtg aaccatgtcg tattgctgtc gtcaactatg 240  
 ggaatgaagg atagtgggtg tgaacttgct gaagtaaacg gcggcattca ggagtgccta 300  
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<210> 2415  
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 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-E4

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cagatcagcc ttttggggct gttcctcgcc tgcattggtc cggcggcgt gcagtacgga 180

tgggcgctgc agctctccct tctcaccgcc tacgtccaga cactggggat tctcatgct 240

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ggcctctata gtgacaaatg cacttctaag cttgggagac tgaggccatt catctttaca 360

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gc 422

<210> 2416

<211> 417

<212> DNA

<213> Zea mays

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ttaaaaacac tttaagaaaa attgcaaatt gaaacaacac ttgaagctga catggagaag 180

aaaaatggga caacaatcca catgaagctt gtaaaaaaga aattaaacta ataatttatt 240

ctagtgtcaa agttcataat gactggactt gtactctgtt attatgctat aataatttgt 300

tgaatattag atgatcatgt catgtgctgt tttttttaca tttttagtga tgttttcattg 360

tgtttttgtt tttctaaata tttcctatct ttctttgatt tttatgattt tttgaag 417

<210> 2417

<211> 132

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-C10

<400> 2417

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gactaataag cgactcctcc tcatctcgct ggcgctctcg ggcattcgga cggcgcgaggc 120  
ctatgcgatc gc 132

<210> 2418

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-C11

<400> 2418

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ggtcgttcgt ggacaataat ggcgcctctc ctggcgctga tgctgctcgt cgggctcgcc 120  
gtgggctccg aggaggagga ggacggcggc ggcaaaaaga agccccacgt caaccacggc 180  
aagtttaagg cggagccgtg gacggacggg cacgcgacgt actacggcgg gcgcgacggg 240  
ttaactgaca ccacggacgg cggcgctgct ggctacaagg gcgagctggg gaaagactac 300  
ggcacctga cggcgccgtt gggcccgtcg ctgtacacca acggcaccgg gtgcggcgcg 360  
tgctatgagc tcaagggccc caagggcacc gtggtggtga cggccaccaa cg 412

<210> 2419

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-C12

<400> 2419

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agtaccgcg cgtgacgggt cggagctga cgcagcagat gtgggatgcc aagaacatga 120  
tgtgcgcggc ggaccgcgc cagggcggt acctgacagc gtccgccatg ttccggggca 180  
agatgagcac caaggagggt gacgagcaga tgatcaacgt gcagaacaag aactcctcct 240  
acttcgtgga gtggatcccc aacaacgtca agtccagcgt gtgcgacatc cgcgccgtcg 300  
ggctgcccac ggctccacc ttcgtgggca actccacctc catccaggag atgttcgcc 360

gcgtgagcga gcagttcacg gccattgttc cggcgcaatg ctttcttgca ctgatacacc 420  
ag 422

<210> 2420  
<211> 401  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-C3

<400> 2420

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aacaaaaggg ttgccgttgg gaatttcctt attcaactgg ggccaacaa taacaacaaa 120  
cccgaaggtc cggttaccaa aggaaaacgg gcggccgggg tctggaaaac acgacgaggg 180  
gcgcgctact cgcagcaccg cgtgcgcagg ttctggctct ccagacgccc cgactacatt 240  
caggccatgg acaagggtgcc cacggaccct aataagtaga cgacgaccat atacccaat 300  
gcatggcaag aagatatata tatcagcaca acgcaactgc atgcgatgct gcatgttgct 360  
gcaattaatc cactatacta tatactataa gagtattatt a 401

<210> 2421  
<211> 250  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-A3

<400> 2421

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ctcccctggg ctcaatcggc tctcctcca agaattggctc aacaacgggt gccagcctc 120  
caatcccctg gaagaatccg ccgccgggga agttccaaaa aaaggattct ccggcaacgg 180  
gttcaacctg gtccgggtca aaaacaacca aatccgcaaa ttcaacgtta aaggcaagtt 240  
cccccgaaa 250

<210> 2422  
<211> 214  
<212> DNA  
<213> Zea mays



<223> Clone ID: LIB148-033-Q1-E1-A4

<400> 2422

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ttaagaatgt ccaaattgaa aggctgctcc ggggcgcaac caaacctggc ccaatttggt 120  
aagggaacca gaaactggaa atccagaaga acaacctcca acaacctggc cccggccaaa 180  
atcccaatta agaataaccg ttcgcctaac caat 214

<210> 2423

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-A9

<400> 2423

aaccaagcct tcgggccttc caaaagggtta accccggggt taatgttcaa gggaggcaac 60  
ttcacaaccg gaaacggaac ggggggag tcaatctaca gcaggcacat cttctccgac 120  
gagaacttca agcacacca cgctaaagcc ggtacgctgt ccatggctaa ctacgggccc 180  
gactccaatg gctcccagtt cttcatcacc accgtagacg aaaaccgggt gcccaagaag 240  
ctggacgggc gccacgtggt gttcggcaag gtggtgaaag ggatggacgt cgtgcgcaag 300  
atcgaagccg agggccagct caccggcgtg cccaaggcca aggtcgtcat agccaacagc 360  
ggccagctgc caacgcccgc cgccgcggc catcggtacc tctga 405

<210> 2424

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-B1

<400> 2424

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acaaaataaa aaggagagag agagagatgg ctctgtcgtc tcgccgtatg gccgccgcac 120  
cattcttcgt cgtcgtcctt ctcgtcctcg tggcggcaga gaggacgatg ggcaggggtg 180  
tggtggaaga gacgctctgc ttgtcgaga gccatgcctt caaaggcgtg tgcctcagca 240

acaccaactg cgacaacgta tgcaagacgg agaagttcac aggcggcgag tgcaagatgg 300  
acggcgatcat gcgcaagtgc tactgcaaga aggtctgcta gggcatgacc ggcagcaagc 360  
cccagccgta cggctggttg atccggttgc acaccgtttg ggcacgcggg catgttccgg 420  
cttctcggct tt 432

<210> 2425  
<211> 200  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-033-Q1-E1-B4  
<400> 2425

cctccctccc tcaaacaaat tattaggaaa agtcccgccc ttttcctccg acatccacaa 60  
agggggaagg gaaaacacct tcattcaacc cgccggaata attggctccg tttccgggtcc 120  
cggcaacaac aacggcggcc ttcacccaag cccaatcctt cttctccctt gttgccccgg 180  
ttaacaaccc aaacttcccc 200

<210> 2426  
<211> 386  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-033-Q1-E1-B9  
<400> 2426

ggaccctgcc actttgcagc agccattact atgtacagag cgcagagggc cgtcacctgg 60  
tccgtctgcc gttgtgtcca ttccggggcaa acacacagac ctccgggagcc tgccgcagct 120  
ccagcgatcg gaccggaaaa atgggtgggag aacagagaaa ttccaccgcc atgggtccggc 180  
gccgcgctc ctctggtgca ctggtaccgc tgccatgtgc cattcagtgc gttggtggga 240  
tctgtcatc gtggtgggaa tccaacggcc ctgggtaatt cgggtgtgct cccacatttg 300  
gcctcgggtga tcagctacag gattccgctc acatccccag tgcaaatcat gtgctcattc 360  
cgggtggatt gattccccgg ggaccc 386

<210> 2427  
<211> 354  
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-A12

<400> 2427

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cgtcgaggaa gaagaaggga taggagacgg ggacggagac ggagccggtg gtcgcaagga 120

tggccggggg catgcaggcg gcggacgcgg cgggccggct gagcgcgctg ctctcgctgc 180

tcgcgctgcg ccggctcctc gccgtgctcc agccgctggc cctgctcctg ctctgcct 240

tccggtggcg cgcgcggccg gccggggccg tggccgcggc cgtggcgctc gatgccgcca 300

cggcctccgc gccgggggcc agcgggagga aggggaacgc ctcgctcgctc tcgt 354

<210> 2428

<211> 446

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-032-Q1-E1-H1

<400> 2428

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cggacaggtc atcaccattg gtgtgagcg ctteggctgc cctgagggtcc tcttcagcc 120

atccttcatt gggatggaag ctgttggtat ccacgagacc acctacaact ccatcatgaa 180

gtgcgacgtg gatattagga aggatctgta tggcaacatc gtcctctccg gtgggtaccac 240

tatgttcctt gncattgctg acaggatgag cagggaaatc accgccctgg ctcttagcag 300

catgaagatc aaggtggttg ctctccaga aaggaagtac agtgtctgga ttggaggatc 360

catcctggca tcgctcagca ccttcagca tatgtggatt gccaggctg agtacgacga 420

gtctggcccc tccatcgtgc acagga 446

<210> 2429

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-H2

<400> 2429

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 tggaatccct cgctaataac atcatgggtct tgggtgtctc ccttgaccg ctcgtcgccg 120  
 gcgggtcatg cgggcccccg aagggtgccgc ccggtcacia catcaccacc aactacaacg 180  
 gcaagtggct caccgccagg gccacctggc acggtcagcc caacgggtgcc ggcgctcctg 240  
 acaacggcgg tgcgtgcggg atcaagaacg tgaacctgcc accctacagc ggcatgacgg 300  
 cgtgcggcaa cgtccccatc ttcaaggacg gcaagggtcg cggctcatgc tacgaggtga 360  
 gatgcaagga aaaacctgag tgctcgggca atccagtcac ggtgtacatc actgacatga 420  
 actacgagcc tatcgctccc t 441

<210> 2430  
 <211> 430  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-032-Q1-E1-F5  
 <400> 2430

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 ccgaacgaga agctcctgcg tgggtgtcaac gtctacccta ccgtaccagc tagccaccac 120  
 acgcgtagcg cgggaaatgc cggcggcgcc ggccatgacg acgaggcggg tgggtgctgga 180  
 ggtgctacgg tcggcctccc gcgacgcctt ccagggtggc ttctccttcg cggcgaggcc 240  
 gcccggtgcc accatgctca agccggccat caccaagccc ctctaccacc accaccacga 300  
 caacgactaa tctggcgcag atctacagca cggccgtcgg catgccttca cactttcaca 360  
 gcccggtggg tgtgccgact atatatttcg tccaattga tgacttacta ccacatttcg 420  
 tcgtactac 430

<210> 2431  
 <211> 339  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-032-Q1-E1-G2  
 <400> 2431

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tgacgatagc tgctggaagg acgacgacca ccaccctatc tgctttcccg aatactgcgt 120  
ggcgacctgc catgatcacg ggcacgcgga cggccgctgc aactgggcat ggtcgtggaa 180  
gccgtattgc cagtgcctgt tggcggactg ccaatacgcg cgaacagctg cgtcgcatgg 240  
cgtcctggct gctcgcgg cgatgaagg atgaacgggt gcggccgatg atcgatgtgt 300  
ccgtcggcat gtcgatcact cattggaacc ccctctaata 339

<210> 2432  
<211> 382  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-032-Q1-E1-G3

<400> 2432

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acgggcgggc tggagctgaa gggcccctgc aagtcctcca tcatcatccg tctcgacggc 120  
aacctgctcg gcaccggcga cctcagcgcg taccaaagga actggatoga gatcgagaac 180  
gtcgagaacc tgtccatcaa cggccacngc accatcgacg ggcagggacc cctgggtgtg 240  
agcaggaaac agtgccagca ttcttacaat tgcaagatcc tcccgaaatag cttgggtgctg 300  
gatttttgtg acgaacgtcc agattcggcg catcacgctg ctcaacagca agttcttcca 360  
gctcaacatc ttcgagtgc ag 382

<210> 2433  
<211> 378  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-G4

<400> 2433

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cttcttcctc gctcgcgttc cattccgtcc cgccctccac cgcgcgcgc gcattcaggg 120  
atggagatga agaagatcgc ctgcgccgtc ctgcgcgcg cctcggcggc caccgtggcg 180  
ctgcgcgcg aggtcgcgc tccggccccc accagcgggt cctcgcgcgt cgcgcgcgc 240

gtcggcgccg ccctcggggc cgccgtcgcc tccttcttcg cctactacat tcagttagcc 300  
ggccggggcg cccggaggcc gaggaagaga cgaaggggag agagagtgac atggctgcgc 360  
gcattccgat gcgtgggc 378

<210> 2434  
<211> 375  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-032-Q1-E1-E12  
<400> 2434

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ctgcggctgg ccatgggcgc cgtgcgcacc aaggccgccg aggccaaaggc cgcggcgggc 120  
gcgctcgcca acgacccccg gacgcagccg ctggcgcgcg gcccgctgca cgactgcgtc 180  
gagtcgttcg acgacatcgc ctacagcctc gaccaggccg ccaagtcctt cgccgccggc 240  
aaccgcgaca ccaccggcac catgctcgac accgtgcgca ccgacatgga cacctgccac 300  
cagggcttcg aggagcgga ggagctcacg ccggtcatgg ccaagcacga ctccgaactc 360  
cccaagctct ccagc 375

<210> 2435  
<211> 325  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-032-Q1-E1-E2  
<400> 2435

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ttggccgcgg atcgggtgcag tgcattcgta gcggaagagg tggcgcgacc tgggtgctgtg 120  
agattgaaga tgagcgggga ctccagcgcg ggatcgagta acacgatgaa gaatctccat 180  
ccactggtga ttaccgttgt caccctgtct cgccgcgacc caaggccagt gcctcggcgg 240  
gaccctcgcg ctatcggcgt ccggtcnccc ccatgccgcg tgaggacacg tgttacctga 300  
agagcaagtt ggtacctgga atctc 325

<210> 2436  
 <211> 429  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-032-Q1-E1-E5  
  
 <400> 2436  
  
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 aagagtacta tctcagctac tggattggga aggatagctt ggtggacgat caagtgtcgg 120  
 catctcaaat aatcaatata atgtggaatt cattgaaagg acggccagtt ctgggccgta 180  
 tataccaagg gaaggagcca ccacaatttg ttgctctttt ccagcccatg gttatcttga 240  
 aggggtggaat cggatctgga tacaagaagc tcatagaaga aaaaagtgtc aggggtgaga 300  
 cttatactac tgaacgcata gctctaattc gagtatctga gacatctatc tacaacaaca 360  
 agactcttca agtagaatcg gtagcaacgt ctttaagctc agcggagtct ttcgtactgc 420  
 aatctggaa 429

<210> 2437  
 <211> 310  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-032-Q1-E1-F1  
  
 <400> 2437  
  
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 gcccgccggg gctcctgggc cgacattgaa ggccgccgtg cgcgcgtctc tcgacctccc 120  
 cgacgacgcc aagcgccgca acgccgacgt catccccggc agcggctacg tcgcgccttg 180  
 cccgccaacc cgctctacga ggccttcttg ctctcgacg ccgccgcgcc cgccgacgtc 240  
 gacgccttct gcgcgcgct cgacgcgccg cccatagtca aggagaccgt taagacctac 300  
 gcggagaaga 310

<210> 2438  
 <211> 409  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-032-Q1-E1-C3

<400> 2438

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cacacggtgt cgatggcggc cgtaataagg agccgccgcc gcgtgtccgt tttcttctac 180

gtcgtcctcg ccgcagctgc agctgcagcc gcggcgagg catccaataa cgtcacctcc 240

gacgatgagt actgggcgga gcgcgcgag gtggctcggc gcgcgaacct cgccgcctac 300

gtcagcgaca ccgtggccgc cacgaaccgc ttcaacgcag acgtgctgag ggccacgacg 360

cggcggggcg tggcgaagta cgatgggccc tgcattggca ctcaacca 409

<210> 2439

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-D2

<400> 2439

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atagaaaatg cttttcagtt caactttcta aagtgcgacg gtgatgttaa gactagaaca 120

gataaactat atccaattaa agacatgacc caaatatctt atgttgaaca aagagtttac 180

ttaccaaga acatgataga gtaaataatga gtttgcaatc taaactgtta gtgtttacgt 240

gtatttggtg ttatgcaata ttataattg aaatgtatgt gtttattccg ataaacatga 300

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tcacttagta cctaaatcga tcgcagaaac atcactcact c 401

<210> 2440

<211> 435

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-032-Q1-E1-B1

<400> 2440

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ctgctgtcgc tgctggctgc cgtgctagcg gtggccgccg atgtcgccaa cgccggccac 120  
 gccaaagcccc tgacgcctgg cgggcgtgtg gtacacgaca accacggcaa gttcacggcc 180  
 gggccgtgga aacccgcccc cgcgaccttc tacggcgggc gggacgggtc cggcaccacg 240  
 gcgggcgcgt gcgggtacaa ggacacgcgc acgcangggc acggcgtgca gacgggtggcc 300  
 gtgagcacgg tgctgttcgg tgacggcacg gcctgcggcg ggtgctacga ggtgcgggtgc 360  
 gtggacagcc ctagcgggtg caagcccgac gcggcggcac tgggtggtgac ggtgaccgac 420  
 ctgtgccccg ccaag 435

<210> 2441  
 <211> 189  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-B3

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 aacaataatg actggagtgg taacaattcc tataacagca gtactgagaa cggtaatagc 180  
 agctacaac 189

<210> 2442  
 <211> 447  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-A3

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 gggcaggcac tcgtggttgg catctacgac gagccgatga cgctggggca gtgcaacatg 180  
 gtggtggaaa ggctgggcga ctacctgctt gaacagggca tgtaactact acgtaccagc 240  
 tggaatgcat gtcgacgacg atggtttcga gtttcgactt ccaataatag taacaacaaa 300  
 gcaaaggcct tcctcccggc gtatttgctt tggctcttct cctccacgcc ataagatatc 360

tagcaattgg tgactcgcct taattagttc gctttgcttt tgaggttgac tcgaccattt 420  
tgctgtagcg tgaattgcat ggacatg 447

<210> 2443  
<211> 259  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-B9

<400> 2443

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atcgacccca tgtcgaacca ggctccgag aaggacgccg gcccacacgt ctccgtgaag 120  
ggctacgacg tggctcagga gatgaagacg gagctgggga ggaggtgccc gcgcatagag 180  
tcgtgcgcgg acatcatcgc ggtgagcggc gtcgtacgct gtgaggcaca cgggccgctcg 240  
cgagtaggct ttgtccctg 259

<210> 2444  
<211> 241  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-C1

<400> 2444

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gcacagctcc tgccctgtct gccggttcca gctgccggcc accgactaca aaggctcatg 180  
cagcagcggg gacggtggtt ttgtcagtgt cgatgcggat ggtgaaggca atgacaacgg 240  
c 241

<210> 2445  
<211> 322  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-F11

<400> 2445

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gcggaagg gcatcgagtg aggacgaggg acggccctct atcggtttct gtatacggag 180  
acgaggacaa gcccgcgctc gtaacttata cggatttagc cttgaatcac atgtcttgct 240  
tccaaggatt gttcttctgt ccagaggccg cgtcgttggt gcttcacaat ttctgtgtgt 300  
accacatcac acctcaaggg ca 322

<210> 2446

<211> 335

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-F12

<400> 2446

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cgctcttgca gcgctcgctg ccggcgggtc gggcaggccc ccgaagggtgc cgcccagtcc 120  
caacatcacc accaactaca acggcaagtg gctcaccgcc agggccacct ggtacgggtca 180  
gcccacgggt gccggcgctc ctgacaacgg cggcgctgctc gggatcaaga acgtgaacct 240  
gccaccctac agcggcatga cggcggtgagg caacgtcccc atcttcaagg accgcaagg 300  
ctgagggtca tgctacgagg tgagatgcaa ggaaa 335

<210> 2447

<211> 317

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-F7

<400> 2447

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gccacgcttg gccgcaagcc gagaagagtg ccgggccggg agaccggacg attattgatc 120  
cgtagcagat tcgctaattg cggatacggc ggacatggag cggatcttca agcggttcga 180  
caccaacggc gacggtaaga tctcgctgctc ggagctgacg gaggcgctac ggacgctggg 240  
gtccacctct gccgacgagg tgcagcgcat gatggccgag atcgacaccg acggcgacgg 300

ctgcatcgac tttaacg

317

<210> 2448

<211> 360

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-G9

<400> 2448

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ctgcttattt tgcgacccat cccgttccca cgcaaaggcg ccgagcgtga tctccgtcgg 120

tgcgggatg gcctcgacc gggaactgct gctgctgctc ctgcccgcg cgctcgtcgc 180

tgcgtggcc tctgtcgcat ccgccgacga cgccaacgcc atgcccacca tctgacccc 240

cgtggcgcat accccgctgg ggtccttoga cggcgacaag ccggcctctg acgatgacgc 300

cgtcgacgac gacgaggacg ccgcccctgt cggcgcgccc aacggggcca ccatgactga 360

<210> 2449

<211> 394

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-H11

<400> 2449

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ccctcaccaa ataaggctccc gcccttttcc gacattcaca ggggggacag gaaatcagcg 120

gccatggcct cgattcgggc gacgaccttc gccgtcatct tatccgtcct cttctgtgcc 180

gcggctggca ccgccgtcga caacgacctc cccgactacg tcatccaggg ccgctctat 240

tgcgacacct gccgcgccg gttcgtgacc aatgtcaccg agtacatgc gggcgccaag 300

gtgaggctgg agtgcaagca cttcggcacc ggcaagctcg agcgtccat cgacggggtg 360

accgacggga acggcacgta cagatcgag ctca 394

<210> 2450

<211> 366

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-H12

<400> 2450

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ttaaattaca cctcgaccgg ccagcgcaat tctgtggctc gatcgatcgt gggggtcggt 120  
gaagcaagtg agcaagctat atatatatag aggagattct tcgagcgagc tagtagctag 180  
atgggttccg ccgtcctctt ttactgcac tgcacgccc tcgtcgtcgc attgtcgtcg 240  
tccatggtcg ccgtcggggc cgccgcccc ggggaaaccc ccaagttcat ctcggcgagc 300  
gcccttgagt gctccgctaa cgtaacggaa atagcagagg cgccaagct gattgatgtg 360  
caaggc 366

<210> 2451

<211> 376

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-D10

<400> 2451

gcgtccactc ctaaactaat atttggagct acggagtata ccaactgcaat cgatatctgg 60  
tctgttggct gtgtagtggc tgagcttctg attggtcagc ctttgtttcc tggggaaagt 120  
ggtgttgatc aactggtgga aatcataaag attttgggta ctccaacaag agaggaaatc 180  
agggtgatga atccaaatta ttctgaattc aagttccctc agataaaaagc ccatccatgg 240  
cacaagcttt ttgtaagcg catgccacct gaagctgttg atctcgtgtc aaggctactt 300  
cagtactcac caaacctgcg ctgcactgct gttgatgctt gtgcccattcc attcttttat 360  
gagcctgcgg aaccca 376

<210> 2452

<211> 349

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-D4

<400> 2452

gggtcgagca cgcgtccgcc caagcgtccg tgatcctcaa ggcgtggaag aacgcgtgcg 60

atgcgactgt ggtacagaag atcgatcatcc cgccgggcaa ctacctgacg ggcgggctgg 120  
agctgaaggg cccctgcaag tcctccatca tcatccgtct cgactgcaac ctgctcggca 180  
ccggcgacct cagcgcgtac cataggaact ggatcgagat cgagaacgtc gagaacctgt 240  
ccatcaacgg ccacggcacc atctaccggc agggagccct ggtgtggagc aagaaccagt 300  
gccagcattc ttacaattgc aagatcctcg cgaatagctt ggtgctgga 349

<210> 2453  
<211> 291  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-D5

<400> 2453

taatggttaa ggcttcagag tagaacatcc acgtaatggg ttagatcaaa atcaggggca 60  
aatttctggc ttggttaaaa aaatccacta gactgtagga gagggataaa gggttacgtc 120  
atgatagaaa acctcaggat gagcaattga acagtgagag gtgaaggcca gatagtgatg 180  
gggggaaagg gttcggggat tttatcagcc gggaccatgt ttcgggtctat tcttaatata 240  
atacaggggag ggaggtatatt agataaaagg atgagtttct gtttgataaa a 291

<210> 2454  
<211> 315  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-E10

<400> 2454

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taatgaagag ccgcagcatg gcatcatcgg ccgcgctctt ggtgcgagcc ggcgcgctag 120  
tggcggccac agccccacag gtagcggagg caaagaagaa gagagcggcg gagagcggcg 180  
aggcggcgga ggcaagaag atccaggacg acttctgtct gacgctgtgc gagggcaaga 240  
aggggacgga cctggtcgtg tgcaaggagt cctgcgcgct ctcccagcag tccaacctgg 300  
tgctgtaagg cagga 315

<210> 2455

<211> 65  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-031-Q1-E1-B10  
  
 <400> 2455  
  
 gcgggctgga accctttgcc tctgtcttta cctctatcct cttccgtctc tactgcactc 60  
 tgctc 65

<210> 2456  
 <211> 311  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-031-Q1-E1-B3  
  
 <400> 2456  
  
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 gcaactcggc ggcgctgttc cagaactgcc tcatgacggt gcgcaagcgc ggggacagcc 120  
 agtccaacat ggtgacggcg caagggcgga cggaccccaa catgcccacg ggcacgtgctc 180  
 tccagggctg ccgcatcgctg ccggagcagg cgctcttccc cgaccgcctc cagatcgcca 240  
 cctacctcgg ccggccgtgg aaggagtacg cgaggacggt ggtgatggag agcaccatcg 300  
 gcgacctcat c 311

<210> 2457  
 <211> 327  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-031-Q1-E1-B9  
  
 <400> 2457  
  
 gaccacgcgt caactacgag tccggtccgt ccagcgtcca gtcgccccagc gtttcagcgc 60  
 catctgcggg tcccacatca tcgttcgaca cagcagcacc gagcattcaa tccgtcatcg 120  
 ggggcgatga cggcgacagt gattatacat gcagcggctc tcgcagtcct ccagctggcg 180  
 tcatcgctcg ctaaaacggc acgcatggcc agcgtcgccc aggacgaact ctcagcattc 240  
 gtagcagtgg ccgttacttc ttcacatcac ctgcataaag attgatccga agctgcagat 300

gaacggaatg ggactgataa ggagtgc

327

<210> 2458

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-C10

<400> 2458

gggtcgacgc ccgcgtccag ccgcattcct ggtgtcgggtg gtgttcctgg gcctgtccac 60

ggtggtgacc atgatcttcg cccgcgaggt gccgctggac ccggcggcgg cggcgaagca 120

ggacgaggcc ggggagtcgt cgggcccggt cgccgttttc aaggcatga agaacatgcc 180

ccccggcatg ccgcaggtgc tcatcgtcac gggcctcacc tggctctcct ggttccccctt 240

catcctcttc gacaccgact ggatgggccc cgagatgtac cacggcaggc ccgacggcag 300

ccccgaggag gtggccaggt tccaggaggg cgtccggcag ggcgcccttcg gcctgctcct 360

caactccgtc gtccctcggag ccagctcctt cct 393

<210> 2459

<211> 367

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-A12

<400> 2459

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atgacccgtg ccagcagcag tagcagcagc cggcgtgtga cgctgggtact gctcgggtctc 120

cgctcgccgc gtctggttgg tgttgccgag gcggtagtgg agttggtgcc tgctgatgat 180

aatatcgccg ccgccgctgc tggcacggcg gtggacgatg gcgagccgcc tcagcagtgc 240

gcgaccccg tgagcgtgga ggaggcgtgc cgcggcgcgt ccgagacgca cgcggcgctg 300

gcctacgacc actgcatggc gtcgctgggc gccgaccgc gcagcaagga ggccgggaac 360

aagaaca 367

<210> 2460

<211> 422

<212> DNA



<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-H10

<400> 2460

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tggccttgct gagcgtggcc ctagtggggc tgctcctctg ccacctcgcc accaccgct 120

cgcgccacca gaaagacatc cacgtcctcg gcagcgtcga cggctccagc gacggcagca 180

gccccgagtc cgaaggccgc gtcgtctacg cggacatgaa gctggctgat acggaatccg 240

atgcgccggc gccggcgccg gcgcggggc cgtcgtccgg ttgaactgag aagcgtgcgt 300

ccagccaagc aaggtgttca aaaccgagaa ctaattaagg gctcgattgt gtgtccggct 360

actactgttc ttgccataat tatatataga tacgcaaagt gtggccaagc ctaccacatg 420

ca 422

<210> 2461

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-H12

<400> 2461

atacactcca ctagagtcag tcagattagc tgtgtgctgc tgcttcccct gcgtcatggt 60

ggaggtcgcg gtgctcgcca cgggtgcgcg gcccgcgcg ctgtgccgca aggccgcacg 120

cgtgcgcaag ggccgcaggc gctctgcctc cgcggggccag gccacggaga tatacgagct 180

cctcgtggac gacaccggcg tcgtcgaggt ggatgccggc gccgccaatg cagtggcgct 240

gcccgtaag cccgccttgc agctggagga aaagggggag ctggacaagg acgtgtgggc 300

gacgttctac ggcaccggct tttggacgag cccgtcgag ctggacgaca acgacgacg 360

gtgatcgga caggcccgcg agcgagctat ccaaagct 399

<210> 2462

<211> 332

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-H2

<400> 2462

acccaagcgt caatcctatt atgatgtcat ctctgatgtg tatagtggta attctgacgt 60

attatgatct cgctgactga aactttctaca ggccagttga tagcaggttg gattccttca 120

cgggacctcg taatcattcg tgctagttag taactcatgt aatatgctct caaaccaagt 180

gtatcctgca ggaattttcg agacacacat atctgcgaat gtgatctcaa tccagtggca 240

tataaatttc tatcatggaa cgagtactcg ttgcatcatt atgagcacat attgaatccg 300

gattatccct gcctctgacg agaatggatt tt 332

<210> 2463

<211> 334

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-030-Q1-E1-H8

<400> 2463

acgcgtccag ctagctatag ctatttcgtc tcgcctctcc caacggccccg gtctcccggga 60

gaagcaagcg tctccgatcc gatgcatcgt gcgagcatat ccaactgcgat ggacgcgaga 120

gcggccatga gctggtagct cggtccctt ctggccgtgg ccatcgcgct gttcctgtcc 180

gtgtcnctcg gcgtgcacgc cgccggagcc ggcaccggcg ttgacatcaa tgtgtcgtgt 240

gcagcgacgc cggaccggga cgtgtgctcg cgcgcgctcc aagctgacag cgactccaag 300

accccgcggg acctgacgga cgcggcactc cgcg 334

<210> 2464

<211> 290

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-030-Q1-E1-G3

<400> 2464

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gggtccagga gaatccagca aagcataaaa caaaactggg aaccttaagg caggatagct 120

tgaccacacc gaagctgggtc caagcaacaa attccttgag cctgcaaagt catgaacttg 180

gtgagaacca ctgggagtca aattgggttag acaagtggat ggctgtacgt ccatgggaga 240  
 acatgttact tgactgtaat gccanagaga gtctgccaac gcatgaagat 290

<210> 2465  
 <211> 259  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D7

<400> 2465

catcactcat ctcatgacat tcatacgaga cacacaaagg gcatctccgt gtattcgact 60  
 tccgaagcaa gctttcataa gatgcgcgcg aggaaccatc caagtgatcg gtttgatata 120  
 tgaaagacca gatgatgcaa aactatgtgt aaaggatctc atattgctgt catcaactat 180  
 tcaaatgact gatagtcgac gtaaacttac taaaatatct ggctgcacac aggagtgcgc 240  
 aatccaaggt ctcaacaca 259

<210> 2466  
 <211> 406  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D8

<400> 2466

cgcggggtcga cacaagcgtc caacgacatg cataggacac tctctatggc cgtctctgtg 60  
 ttttcatctt cggctgctat ctttgacaag atgaacaagg acaagcactc agaaaattca 120  
 caaggagaaa gcacggacaa tatttttgcg agcgttggtg aagggaccgg acaaccaaag 180  
 aatcaaaacc ttcatgtgtc tcacagccga cgtagtatca tgagaatttc taatttttcc 240  
 atgaaaagag gcccttcaat ggccatgata gtccttcag tagctatcag agtccttca 300  
 atatctctga gaggtccttc aatgtcttca agagcatctt ctgtgtctgt aaaggaagac 360  
 caaatttccc caaataaatc agacgaggaa acggaatcag tggttg 406

<210> 2467  
 <211> 368  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E1

<400> 2467

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cgcaatgatg ggatttgcta atgatgcttt cgtaggatgc gcgcgcggaa acaagcaggt 120  
gaagggtttc atgtttgaaa aaccggttga tctgaaagta ggtgtgaacc atgtcgtatt 180  
gctgtcgtca actatgggaa tgaaggatag tgggtggtgaa cttgctgaag taaagggcgg 240  
cattcaggag tgcctaatcc aaggtctcaa cactgggacg ttggatttac aagtcaatgg 300  
ctggggccat aaagctgcac tagaagggtga gtacaaggag atctactcac aaaaagggtt 360  
gggcaaag 368

<210> 2468

<211> 139

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-F1

<400> 2468

tcaggagacg ccgacgccaa cccatcgatc tctcacgcga aactacagct cgccagcgcc 60  
cggagatgtg cccaacgaat cccgatagct ctggccaagc cgccgcgggg tcctgttaga 120  
acacctagtg gcagtaggg 139

<210> 2469

<211> 292

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D2

<400> 2469

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ctcgccgccg ctgcgcgacg ctgccgttgt cgccgccagc ctgcaggagt tcgtcgccgc 120  
caattcgac gcatcatcag acggcgctccg gcggcagcgc aacgtctgcg tcacgtcggg 180  
cgggaccacg gtgccgctgg agcagcgatg cgtgcgctac atcgacaacg tcagctccgg 240  
ccaccgcggc gccgcgtcca ccgagtattt cttaaaggct ggctatgcgg tc 292

<210> 2470  
<211> 341  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-030-Q1-E1-C11

<400> 2470

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cggtccgggt ggtggccagc gaccaccgca aggccacctc atggcacgtt ctccccgctg 120  
actggaagtt cggcgtcacg taccaggcat ccaagaactt ctaagtagcc actttccctc 180  
ctcttcttca tcctgcatat gccacaagc aaccatgcaa atgataacat gcacatgca 240  
tgcatattca ttctttcgct catgcactcc aatatgggtgc cggagttaaa aaaatgtaaa 300  
tcaatgtgca aactcaaagc acatcttaac cagttgtgat c 341

<210> 2471  
<211> 368  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A7

<400> 2471

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caacgatccg gccccggccc cgcgcgggtca cagcaagccg ggacatggcg cgcggcggca 120  
tcgcccgcct actcgccacg ctctctctct tcctctgct cgcacgccc ctgcgagacg 180  
gagcttccga ggcagaggcg gcgggcctcg cgcagggcgc gtccgaggcg gcggcgccgg 240  
acgcggggcg ggacgcgcag cagcagcagc tcctgccgcy gccctcgtc atcgagctcc 300  
cgtcgctgct ggccgaggac gaggacgagc ccggcgccga cgccgtgccg ccggacgtgc 360  
gctgcgcc 368

<210> 2472  
<211> 391  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-030-Q1-E1-B1

<400> 2472

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tgctcctccc tctccttaa ggaaggggtg caaaacttca gcgaccgacg aagaagacgt 120  
tccggtgcag cagcggttca tctgggtcaag gaagagaaag atgccgcgcc tttttcacga 180  
ctccatcatc tctcttctgg attactctca gtgctgcagc gtaaactcgc gcgcagttcc 240  
ctgtaaaagc tggagctttt ctgagcgtgt angtgcgttg gtggaacttg ggccccagtc 300  
ccccaccca agatctcacc tatctgcact gggctggccg gctgggcccg ccgccaacca 360  
acgtgcttcc gccattgcgt cgccgcataa c 391

<210> 2473

<211> 297

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-H6

<400> 2473

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tctagtgcga ttcagtcata tgacgtgtag gaagctgcgg aaggtcctag cctgcacaga 120  
tatagaccac gagcaagcaa ccaagtgtgt caccgaggct cttctgttca aagctgatgc 180  
accacaccgg caacgagctc ttgcagcgga cgcaataacc tgccggaaat tcgccgagcg 240  
ggcttacaag tacagaccac tcaaagttgt tgagtttgat cggccctacc cacagtgc 297

<210> 2474

<211> 360

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A3

<400> 2474

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cgctcctatt ctagcatttg tgacaacca cattctgtac ctcaacttct acgaacttga 120  
caaaggcctg aacatgaagg tttgtactgt gataatcatt gctcagtgtc tcctatgggc 180

actgtgggct gtcattgactc ggcattcctc acggctgaag atcatatttg ttgccatcgg 240  
 aggtgcggct gcagtacttc tggaagcttc tgacattcct ccgcgatggg gatatgtgga 300  
 tggccgtgct atatgccttg ctgtggctat ccccttttcg taccttttgt ggagctttgc 360

<210> 2475  
 <211> 262  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-F3

<400> 2475

gggccgacac acgcgtccaa gcggacgccc attatTTTTT tttttttttt tttttttttt 60  
 tttttttttt tttttttttt tttttttttt tttttttttt ttttttttta aaaaaaacc 120  
 caaggcatta aaaaaaaaaag cggggtaaaa aggttgatcg atgggaaatg agaatgaaga 180  
 acaaggcaag aagatacaaa caaagaccca ccaggaggtc agacccggca ttgacgactc 240  
 aactacaagc ctaggagaaa aa 262

<210> 2476  
 <211> 287  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-F7

<400> 2476

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 ggctcccgtc tccatgggtc tcctctcaaa caggattggg agggagagcc tcaaggcggg 120  
 ggatcatatc tactcctgga gggcggcgtg ggtctacgc catcacggaa tatatgtggg 180  
 cgatgataag gtgatccatt tcacaagagg aagaggacag gaggtcggaa caggaactgt 240  
 cgtcgatatt attcttgtga gttccacccc aaaacgaagc aacacgc 287

<210> 2477  
 <211> 284  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G2

<400> 2477

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gggcactaca tggacgtcgt cacgggaggc gacatgtggc agttgctgaa ctattgcacg 120

ggggagatga atgaggcgct ggtcaatctt caccacagcc aaggcatgct gcagaagtgc 180

aacctctaca agttgagcct gttcttgacac aggtggcagg aggagtctta gcccggcgac 240

atcggctgga atctttcgac atggtcgccg gtcaggacga tgct 284

<210> 2478

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G6

<400> 2478

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gcaaggcggc gggcatcctg cggtctgctga tggggatggc ggccggcggc gcgcccgcct 120

cggcattgcc tcggggcggc ggcctgatga tgggtcagca cgtcatcctc gacgtcaacg 180

gggaactgtt ctggggcggc gtcggcggcg gcggcggtgc gccggcgctc aaggccgcga 240

tcgcccgcgt gaagga 256

<210> 2479

<211> 290

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G8

<400> 2479

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tgccgtcgcg gtcctggccg cgcgcccggc gtctgcaggc gggggagccg cggcgggtggc 120

ggagatctgc atgaagactc cgtccccga cctgtgcacc aggacggcgg ggaagcacgc 180

caacaagtac aagggtggtg acgcggtgac ggtgctagag atgcaggtgg acgcgttcaa 240

gaagcgctg aaggcgccgc ggaggctcgc caacgatgag gtcaagacgg 290

<210> 2480



<211> 246  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-E8  
  
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 gttcacctat cggccccgtg catgtacata gttggggaca cacgtcgcta ggacgatgag 180  
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 cttggc 246

<210> 2481  
 <211> 400  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-C11  
  
 <400> 2481  
  
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 taagatggag atgatcatga cgatcctcat cgccgcgctc ctggttgctg ccgtctcggg 180  
 caccgcagtg ctggcctcta acgacgcagc tgcagccggt gccgaatccg catccgcgctc 240  
 gtccaattat gtggaatcct cccgctggag cccccggtta cgtctacagc actggcaccg 300  
 cctcgaggct gacagctaga ggtccagccc ttgccatagc cacggcattc atcgttacac 360  
 gatgcatcat catctgtaaa tctgtgaaac tcatcggttt 400

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 <211> 293  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-C6  
  
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ttctacggac gcaacatcgg ctaccgccgat aagctgaggg acatcggctt catcgtctag 120  
 togatctgca agccgctcga cgccctggctt aaggacatgc gcgcggtcgc ttatttcatc 180  
 cgagtttgtt tttttgcagg attcttaaaa gttggaccgt gctgctagta ttccatgttt 240  
 cgtgttttca taatggacga cgtctgtaga tgtataaaaa tcctctggcg ctt 293

<210> 2483  
 <211> 329  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-029-Q1-E1-D10  
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 cggattcaga ggcaacactg tcatcaccac agggcactca tcaatcaatg aaatctaaga 180  
 caaaccatg aatcccagcc agtacaactt gatcgcttca aaagctgtcg cgacaaccat 240  
 gctcatacag gggatgtaat gacaaccct tcacctgaaa tgcattgtga tgctgtcgct 300  
 ggttccaact tcattttcag taataacaa 329

<210> 2484  
 <211> 365  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-028-Q1-E1-H4  
 <400> 2484

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 gtaccaggcg gagcacgcgg cgagtgcggt caaggacacc gccgcagccg cggccgacag 180  
 tgcgagctg cagcagcacc gccccaccgg caccgttgag caggtggcgc agacggggcca 240  
 gggcgtggcg gcaggcgtca aggacacggt ggcgggcgcg gcggttggcg tcacgaacac 300  
 ggtggcgggc gtggcggcg gcgtcacgaa cacggtcacg ggcgccgtgg cnggcgtcac 360  
 gaaca 365

<210> 2485  
 <211> 349  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-028-Q1-E1-H8  
  
 <400> 2485  
  
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 ccctggtgtc ggcaaatgac ctcaagaaag tgctgctctt ctcccgact cgcactctacg 180  
 ccgtggcttc catctccgga ttgcacctcc gcatcccttc ccacagcacc caagcagacc 240  
 acagcaacgg ctgcaacccc tgctggaacg ccgtggtaca cttccccatc ccggctgccg 300  
 ctgacacccg cggcctcgca ctccacgtga ggctccgcgc ccagcgtct 349

<210> 2486  
 <211> 399  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-A10  
  
 <400> 2486  
  
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 cgcgtccgcc cacgcgtccg cacaccttga gacctgcgtt gtcacccacc catcgagggt 120  
 ggggccgcc gcaggttcag ccgttcctgt tcttgataaa acgagagaag gatggcagtg 180  
 tttcagggag ctgtcctatt cttgtttctc ctctcgtcg cagcagaggt gggaaccatc 240  
 gatgccaaaa tgggagtagc catgcccatg catgccttga taatggagaa agcgaaacag 300  
 caggagacgg agaagaagga ggagaaaagc acggagaagg aagagagtca atgcttatcg 360  
 ccgagtctcc agttcgaggg cttctgcttc aacagcgac 399

<210> 2487  
 <211> 362  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-A11

<400> 2487

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gccgcaaggc ggtgcatgcc agcctctccg cgctcaagag cgcgggcgtc gagggcgctca 120  
tggtggacgt gtggtggggc atcgccgagc gcgacggccc gggccggtac aacttcgcgg 180  
gctacgcgga gctcatggag atggcgcgca aggccgggct caaggtccat gccgtcatgt 240  
ccttcacca gtgcggcggc aacgtcggcg actccgtcag catcccgtg ccgcggtggg 300  
ccgcggagga gatggagaag gaccaggacc tctgctacac cgaccagtgg ggccgacgca 360  
ac 362

<210> 2488

<211> 291

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-A3

<400> 2488

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cgtggccgct ctgctggtgt tcgcgcgggt gtcgcctgcc gcgcgactg tggccgcaga 120  
ggcagacgcc aatgcgaacg ctgtgggaag cgcgccatcg gtgcccgtg gctcgtgga 180  
catgcccag ctaggcgcca agggcgacgg caactcggac agcaccgccga tgggtgctcaa 240  
cgcgtggaag cacgcgtgcy acgcgacaga gcaccataag atcgtcatcc c 291

<210> 2489

<211> 213

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-A5

<400> 2489

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atattacttc atgcaaggaa aacatgtggt gatagacata tcagatcaac gattcacagt 120  
catttcatag tatgataaca aatatcccaa aatacatgtg aacttggcag tcttatgtat 180  
catgccctaa agaaaatcta atggcagcac act 213

<210> 2490  
 <211> 116  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-A7  
  
 <400> 2490

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 cagtagcacg cacagtagaa gccaacgcca acacgacagg caaaggtata ggacgc 116

<210> 2491  
 <211> 375  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-A9  
  
 <400> 2491

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 taattcggtg atgttgtcgt tatagttcct ctacactaca ctcggtgacc ccgcctgcat 180  
 ctagttttgc ccgtccatgg gcggagaatc tgaccatggg tttgtcccaa gcttgcatca 240  
 cagtggcgca tccagtgacc cacgtgatct ctgctttgcc gcagaaaatt tttgcggagc 300  
 aactgccggg tgctttgtat ttcagctttg taaatttact tttatccagt cgttctgagt 360  
 ccaagccgtc agtgc 375

<210> 2492  
 <211> 292  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-B1  
  
 <400> 2492

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 acatggcagc cgccctccgt gtcgtcatcg ccgtcctcgc cgtcgtctcg gtctctctcc 120  
 ggcgcgccac ggcggccacg gtccccaccg tcgacgaggc gtgcaagcag tacaccaagt 180

acccggagct gtgcgtcaag tccctgtcgt ccgcggcgcc ggaggcgaag gcgaaggcgg 240  
agcggggcgg gctggcgggg ctggccgggc tggcgctggc gcaggcggcg ca 292

<210> 2493  
<211> 209  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-028-Q1-E1-G7

<400> 2493

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ccctcgacat cctcacgtcg tgttcgggca gcgtgagacg catcacgggc tccgcagcgg 120  
cggctagcac atccattacc aggcgtaggc gcctgggggtg acgtacgact cccaacggta 180  
cgaggccgta ccaggctatg gtcatgttg 209

<210> 2494  
<211> 351  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-028-Q1-E1-H12

<400> 2494

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cagctcaaca acgtgtggga ggcagtctac atccaatacc tgatgggcgt gcacggcgtc 120  
atcgttgacc gggtaggagga gatctcggac gccgtggccg gttttggtct ggggaaacca 180  
ggccttggcc ggggcggtgc tggcgtggac ggagcgaana cgcacagggc tcaggccttc 240  
tcgcagcagc agctgggggtt cctgctccgg cttatccctg aactgattga gcagcggcac 300  
tgaaggacgg tacaccacca tatgtaacat ccagttttt tgacccccc g 351

<210> 2495  
<211> 351  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-028-Q1-E1-H2

<400> 2495

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ggaagagtat gggtaaggga cgttctgagg tcgtcgaaat cctcgcgtcg ggttcgatca 120

gggtgaccgc cctctcgggc tcggtggtgg cggctatcac aaccagcagc agccgtacgc 180

acctgcggag acatactatg cccattggta ccaggccgta ccaggctatg gtcctgttgc 240

tgaaggaaga cctgtgagaa tgaggcgtct cccatgttgt ggcctcagct taggctggtg 300

tctgttcata aacgggtttt tcatggctga cattccatgg ttcattggag c 351

<210> 2496

<211> 382

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-028-Q1-E1-E4

<400> 2496

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ccacccgccca gccatggaga tgaagaaggt cctctgcgcc gccctcgtcg ccgcgcctc 180

ggccaccgcc gtgctggcct cggtcgcctc cgaggcgccc tccgaggcgc ccgcgggcgc 240

ggccggtggt gcggctggcc ctacgcgaag cggcgccgcc gccgccgcgc tgccgcgcgc 300

cggggcgcctc gtcgcctcct tcctgccta cgagctccac tgagcgacga cgcgcggggc 360

ggcaacgttg ggatgcatcg tg 382

<210> 2497

<211> 76

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-028-Q1-E1-F1

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ctttttttgt tgtttc 76

<210> 2498

<211> 374  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-028-Q1-E1-F11  
  
 <400> 2498  
  
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 tggtaaggca ggtattcgac acaatagcgc accagccgaa gccgaagaca acggcactgg 180  
 gttgccgcca tctactgcaat ggatcaagag cttgttctca cgcacgggca caatcctccg 240  
 gtcattccag cggcagatcg catcattggg agaattgagc aatacctcaa tataacgata 300  
 ggcgactgtt actgcttgag cccattgggt ccaatgtaca tacgaacatc acgagcagtt 360  
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<210> 2499  
 <211> 388  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-028-Q1-E1-A9  
  
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 gtgcaggagg catgggcatc ggcgtgcggc ggcactggga agcagacaat cctcataccc 180  
 aagggcgact tccttgatcg acaactcaac ttcacaggcc cttgcaaggg cgacgtgacc 240  
 atccaggtgg atggcaatct gctggcgacc acggacctaa gccagtacaa ggaccatggt 300  
 aattggatcg agattctacg cgtggataac ctgggtcatca ccggcaaggg aaaccttgac 360  
 gggcanggcc cagccgtgtg gagcaaga 388

<210> 2500  
 <211> 430  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-027-Q1-E1-H6



<400> 2500

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cggaccgacg aggtccccgg gatcgtcgac gacttcaggc gggccgcacg gaacgcgatc 180  
caggctggtt tcgacgccgt cgagatccac ggcgcgcacg ggtacctcct ggagcagttc 240  
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cgtctcgccg tggaggctgt ggacgccgtc gtccgcgagg tgggcgcgcg ccgcgtcggc 360  
atcaggctgt cgcccttcgt cgacttcgtg gactgcgtgg actccgaccc ggtggcgctc 420  
ggccactaca 430

<210> 2501

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-028-Q1-E1-A11

<400> 2501

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atcaccggca cctcctccac cccggggggc gttagcctgc tctgcactgc caatgtgcca 180  
tgcaccgggg tcaccatgga tgacatcaac gtctagtata gcggcaccaa caacaagacc 240  
atggctatat gcacgaacgc caaaggcagc accaaagggt gcctcaaaga gcttgcattg 300  
ttctagaccc tccatcgact gagacatctc tctacttata aattttctcc cgtccttgca 360  
gtgcccacta gatgctatcc 380

<210> 2502

<211> 379

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-F9

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gacaaacttg tacacgagat caaccaacgg catcgctgcc actgcagcag gagtggcagc 240  
aactactcac agaaaggctcg gcgttggtcc gtttggcatg tcaaacatgt attagtgact 300  
ggatcatggc cgaatcatgg tgaatcctct gtgcggttga tgggtctatg ctgccttcag 360  
gtggctaaac accgacaac 379

<210> 2503  
<211> 366  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-027-Q1-E1-G1  
<400> 2503

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tgtcacgtac caggcatcca agaacttcta agtagccact tttcctctc ttttcaacc 180  
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tttcgctcat gcattccgat atggtgccgg agttaaaaa atgtaaatca atgtgcaaac 300  
tcaaattgaca tcttaaccag ttgtgatcaa tctcaaccgc taatgcattg cacacaccga 360  
atgaag 366

<210> 2504  
<211> 330  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-027-Q1-E1-G10  
<400> 2504

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ttttctgttc ctgttggtct atcgattctt gtaagggcgg gttttgcagt tcgttgctct 180  
tttatgtcat ggtggactcg ttgtttttta tgttttctgt tggaacggcg tgtttcggat 240

gatggttccg ttctgtcctt gacctgggct gggctgcacg cggcgaccag agggaacgcg 300  
accggcagag ggcgcaagcg cggcggcccc 330

<210> 2505  
<211> 372  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-027-Q1-E1-G12  
  
<400> 2505

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ggacattaag cctcaaaatc tcctgggttaa tcctcatacc catcagctaa aactgtgtga 180  
ctttggcagc gcgaaagttc tggtaaaagg cgaaccaaac atttcttaca tctgttctag 240  
atactacaga gctccagagc tcatatttgg tgctactgaa tacacaacag ccattgatgt 300  
ttgggtctgct ggctgtgtgc tcgctgagct gcttctagga cagcctctgt tccttgaga 360  
aagcgggtgtt ga 372

<210> 2506  
<211> 373  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-027-Q1-E1-G4  
  
<400> 2506

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gttcgctgcy cagggccggc gccggcctcg ctgtcttcta gcaggaagca gcatcagcag 180  
cccagcagc cgggctgcyg cagcagcgac gaccactacc agcagcagct gatcatgctg 240  
aggcggacga tgagcgggcy ggcgttcccg ccgccgatct ccgtgatgtg caagggcggg 300  
cgggcgtggc tctgcctgct ggcgcaccgc gaggggtggac gcctcgtgct gcggcagatg 360  
cgctgcctgt cgc 373

<210> 2507  
 <211> 345  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-027-Q1-E1-H10

<400> 2507  
  
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 ccgatgccac cgtcctaccg cgccgtctag agcgtcgatc gatcgcgcac ngtgctgtac 180  
 acaacttaaa gagagcgaga ggggaacttt tccccgttt ctttctctag ccagccttgt 240  
 ctgtcccccc ctcgtttaaat ctctctctct ttttttctgt tcgcttccca ggaataatac 300  
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<210> 2508  
 <211> 402  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-027-Q1-E1-E11

<400> 2508  
  
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 tcgattaaca tgtctagctg ctacgacatc gtgattcgac gatgttaatt aatcggcagc 180  
 tttcattatg atgtgtagca gtataactgta tgattaattg tggatctttt cgaaaacaaa 240  
 aactgtaata ttcgtgaaat tgtagagcct tcacctatta ttaatctatc aagtaatcga 300  
 gaaaatgtaa ttaatcccaa acgtgaatac atggtgcaaa aacatgaatg atggtaggaa 360  
 aatgaaaaca acatttgaaa aaaaaagaaa aaaaaggggg gg 402

<210> 2509  
 <211> 418  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-027-Q1-E1-E2

<400> 2509

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cattgcaatt acgagttatg ttgagcgccg tagcgaacgt agccaaggcc ggccacgcca 120  
agccccctgac gcctggcggg cgtgtggtac acgacaacca cggcaagtcc acggccgggc 180  
cgtggaaacc cggccacgcg accttctacg gcggggcgga cgggtccggc accacggcgg 240  
gcgcgtgcgg gtacaaggac acgcgcacgc aggggtacgg cgtgcagacg gtggccgtga 300  
gcacggtgct gttcgggtgac ggcacggcct gcggcggtg ctacgaggtg cgggtgcgtg 360  
acagccctag cgggtgcaag cccgacgcg cggcactggt ggtgacgggt accgacct 418

<210> 2510

<211> 423

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-027-Q1-E1-E3

<400> 2510

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tgcagcgcggt cagcctcgac ctcatcaccg aggcgtccgg caccatgtcc gcaggcatcg 120  
ccctgccacc ctccaacgcc ggagcgccct cctacggcgc ggcgggcgct tccgggggct 180  
ccgccgatgc ccccgccggc gcctccgagg gcctgcgag cggcagcggc ccgtctggtg 240  
acgacgcgcc ggcgtccggt gctgggtgcca gcgcgtcggc tgctgatgct ccggcgggccg 300  
cngcctcatc cgggtccctct agcgcaccag cgccatcgtc gtcgtctgag tccctccgccg 360  
caccaggccc atcttctgat ggcacctcca acggcccaac aacatcgctc ggcgacgatt 420  
ccg 423

<210> 2511

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-E4

<400> 2511

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ggtcacctcc atcgtaagt aaatcaccac ctcttcacc actgttaagt tcgcccgcgc 120  
 caccagcgcc ggtgaggta cctccaccgc taacgaaatc atcacctcct ccaccaccga 180  
 taaggtegcc acccccacca caagcaaact cacctcctcc atcagctcta ataagctcac 240  
 ctctctctcc gatgcaatcc cctccaccgc ctgctccagt cagctcacca ccaccaccta 300  
 taaaatcacc accaccggct ccagtaagct caccacctcc tctggcgcaa tcccctccac 360  
 cacctgctcc agtcagctca ctaccaccac ctgtaaaatc atctcctcca acgggtccaa 420  
 ttaactcaac aacggct 437

<210> 2512  
 <211> 402  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-027-Q1-E1-E5  
  
 <400> 2512

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 agagcggcgg agagcggcga ggcgcgagg gcaagaaga tccaggacga cttctgctcg 120  
 acgtgtgctg agggcaagaa ggggacggac ctggtcgtgt gcaaggagtc ctgcgcgctc 180  
 tcccagcagt ccaacctggt gctgtacggc aggatccagt gcaagggcaa gtgcaccgag 240  
 cagaagggca tcacggcgcc ggccatgaag gtctgccagg aggagtgcga caaggcgtac 300  
 gtggtgaagg cggccgaggt caccaaggcc tgcagcgtca cctgcgcgcaa ggagaagaac 360  
 cggcctcag ccagaactgc aagaggtcct ngcacctcc tc 402

<210> 2513  
 <211> 385  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-027-Q1-E1-E7  
  
 <400> 2513

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 ccttttccga cattcacagg ggggacagga aatcagcggc catggcctcg attccggcga 120

cgaccttcgc cgtcatctta tccgtcctct tctgtgccgc ggctggcacc gccgtcgaca 180  
acgacctccc cgactacgtc atccagggcc gcgtctattg cgacacctgc cgcgccgggt 240  
tcgtgaccaa tgtcaccgag tacatcgcgg gcgccaaggt gaggctggag tgcaagcact 300  
tcggcaccgg caagctcgag cgctccatcg acgggggtgac cgacgggaac ggcacgtaca 360  
cgatcgagct caaggacagc cacga 385

<210> 2514  
<211> 384  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-E9

<400> 2514

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tacacggaca atttggagat ctgatgaggt tatttgatga atatgggtgct ccttcgactg 120  
caggtgacat tgcttacatt gattatctat tcttggggga ttatgtagat cgcggccagc 180  
atagtttaga aactatcact cttcttcttg cattgaaggt tgaatatacct caaaatgtac 240  
atttgattcg aggaaatcac gaagctgcag atatcaatgc tttgtttgggt ttccgaatag 300  
agtgtataga acgaatgggc gaaagagatg gtatctggac atggcatcga atgaataggc 360  
tatttaattg gcttcctttg gctg 384

<210> 2515  
<211> 363  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-F10

<400> 2515

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cggacgtcga tcgtgttctt cagcacgggc tagctagctc cctccctccc agccatggcg 120  
acgccggaca acaaggggca cgggcatccg ctgccaagt ttggggagtg ggacgtgaag 180  
aatccggcca cgtccgaggg cttcaccgtc atattccaga aggcccgga cgacaagaag 240  
accaccaccg gccctggggc tgggaacgcg cgcgcaggca ttccgcgggc cttcaggaac 300

ggcggcgggcg acggcgggta caggcccgac ttcggcgacg gcaaccagta cacgccgccc 360  
 aaa 363

<210> 2516  
 <211> 362  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-027-Q1-E1-F11  
 <400> 2516

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 ctctctccgtc tccaccggcg caagccacac ctccaccacg tcgccgtcgt cctccggcgt 120  
 cgtcgtcaag gacgtcgtga aggatgcggc ggcggccggc gaggtgatga cgcccgccga 180  
 cgccgagaag cctatctctg tcgaccccaa ggcagacgcc atcgtggtga tggacgcca 240  
 gaaagaggag ggcaacaaca aggtggccgt ggaggaggat ctgcttcctg aatccaccat 300  
 ggccgacgag gcgcttgctg tggatgaggg gcccaagggt gacgaaccac tcaaatcaa 360  
 ag 362

<210> 2517  
 <211> 360  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-027-Q1-E1-F12  
 <400> 2517

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 gtggccgctc tgctggtggt cgccgcggtg tcgcctgccg cgcgcgcggt ggccgaggag 120  
 gcggaggcga aggcgaaggc tgtgggaggg gcgccgtcgg tgcccgtgg ctcgctggac 180  
 atcgcgacgc tggggcgcaa gggcgacggc aagtcggaca gcaccccgat ggtgctcaag 240  
 gcgtggaagc acgcgtgcga ggcgacgggg cagcagaaga tcgtcatccc caaggccaac 300  
 tacctgacgg gcgcgctgga cctggtgggc ccctgcaagt cctccatcat catccgcctc 360

<210> 2518  
 <211> 324  
 <212> DNA



<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-C5

<400> 2518

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gccgcgctct tgggtgctagc cctcgcgcta gtggcgccca ccgccccaca ggtagcggag 120  
gcaaagaaga agagagcggc ggagagcggc gaggcggcgg aggcgaagaa gatccaggac 180  
gacttctgct cgacgctgtg cgagggcaag aaggggacgg acctggtcgt gtgcaaggag 240  
tcctgcgcgc tctcccagca gtccaacctg gtgctgtacg gcaggatcca gtgcaagggc 300  
aagtgcaccg agcagaaggg catc 324

<210> 2519

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-C7

<400> 2519

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agggcattggg gcctgggtgct ggttcaagct ccgctggctc ctcgaggggc ctggccaccg 120  
tgtcacgtgc gttgacctgg ccggaggcgg cgtcgatcct accgacccca acaccatccg 180  
gtccttcaag cagtacgaca agccgctcat agacctcatc tccaacttgc cagacggaga 240  
gaaggtgatt ctgatcggac atggcgctgg agggctgagt gtgatccatg caatgcatga 300  
atttgttgac aggatcggtc aagcattttt cgtggccgcc acaatgctgc cgttttgatt 360  
tcaagccgat gaagataaga acgatgggtt accgac 396

<210> 2520

<211> 378

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-D10

<400> 2520

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accggccccc ggcgcgtgc cgtacgtgcc agggacgacg ccgggcggcc gatggagttc 120  
acgtcgtcct acttccacgc cttcggcaac cccgacctcg cggcgggtggc ctccggcgac 180  
ggcggcagcg cgcaggccca ccggccgcgc cgctccaccg acggcgcgaa ggcgaggac 240  
ggcaggagcc ccaccaccac aacggcgagg cgcgcgccgt ccatgttctg cgtccccgac 300  
acggaggcgg aggagcccaa cggcttcctg gacgagtga ccctctgcc caaggcgctc 360  
tgcggcgaca ttttcattg 378

<210> 2521  
<211> 323  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-D12

<400> 2521

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accggcgagc accggggggcg ctctccgtcc gctaccgacg gagcaacgcy ccgagctaag 120  
atgtgctagc atacgtatgt agccgagcaa ctgatgtgcy aaatagacgg taagcaactc 180  
acttcggcgg ccattcttcgg ccacgacggc gccatgtgcy ctgagagcag cgcagtcacc 240  
gagttcacgc ccaaggacat ggatggcatc atgaacgact tcgacgaccc ggtgcagctc 300  
gcgtggacct gcctgatatt ggg 323

<210> 2522  
<211> 435  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-D6

<400> 2522

gggccgaccc acgcgtccag gcacgcaccc tgtctgtcac attgttcatt ctgacggcct 60  
atgtcgccgc gacggcgga ccgaccgtct gtgcgggtcaa atctccggcg agcacaacga 120  
ccacaaggaa acacgaagca gccaaagaag agacggatgc gcctgccaag gcaccagctg 180  
ctgcagccac cgaggggcct gctgcgggag cgcccatgac atggccggat ggcgggcctg 240  
agttcgtcaa gatggtcac aagaaccct tctttaaaag cgcacctcca tctggtagcg 300

aagacggcct acccattgac cccactccag aaggcagcat gaactaaatt aaataccaat 360  
 tacgataccg accagatatg catggagcat gcaagaatgt tgcgaacga atatatgcta 420  
 tgaatggтта catgt 435

<210> 2523  
 <211> 393  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-D8

<400> 2523

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 gctggtcgcc gtgctagcgg tggccgccga tgcgccaac gccggccacg ccaagcccct 120  
 gacgcctggc gggcgtgtgg tacacgacaa ccacggcaag ttcacggccg ggccgtggaa 180  
 accgcccac gcgaccttct acggcgggcg ggacgggtcc ggcaccacgg cgggcgcgtg 240  
 cgggtacaag gacacgcgca cgcaggggta cggcgtgcag acggtggccg tgagcacggt 300  
 gctgttcggt gacggcacgg cctgcggcgg gtgctacgag gtgcggtgcg tggacagccc 360  
 tagcgggtgc aaacccgacc cggcggcact ggt 393

<210> 2524  
 <211> 351  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-C12

<400> 2524

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 ctgatggggt cgtggcgcaa ggcctacggc gccctcaagg actccaccaa ggtcggcctc 120  
 gccaaagtca acagcgaatt caaggaattg gatattgcaa ttgtgaaggc aaccaaccat 180  
 gttgaatgcc ctcccaagga acggcacgtc agaaaaatac tcttggcgac ctcagcaaac 240  
 cgccctcgcg cagacctctc gtactgcata tacgcattgt caaggagatt gtccaagaca 300  
 aagaactgga tagttgcgct caagacattg atagtgggtgc ataagcttct g 351

<210> 2525

<211> 355  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-027-Q1-E1-A5  
  
 <400> 2525  
  
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 gattcagact ggtgccattc gatttgattt ggcgcggggg actttcctat ggccgcctcc 120  
 atcgcggcct cgcccttctt tccagggtcg ccggcgccgg ccgctcctaa gaacggcctt 180  
 ggagagcgcc cagagagcct ggacgtccgc ggcgttgccg cgaagccggg agcctcgtct 240  
 aatgccgtga gggcgggcaa gacgcgcgcc cacgctgccg tccccaaggt gaacgggtggc 300  
 aagtctgcgg tggcggatgt ggaacacgag accgtaactg taccttcgtc ggtgc 355

<210> 2526  
 <211> 386  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-027-Q1-E1-B12  
  
 <400> 2526  
  
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 aattgggggg aggctcctct ccgccgttgg aaccgctgcg gcgtcgcagc ctgtgcgact 120  
 ttcctgctgg ttcctcatcc ctcagggaca gattttgcat tctttggcat tactgtttga 180  
 tggcagacag tagtgctcct tctctgtgga ggcattgggg caaaaggcag ttgaactgaa 240  
 cgggcacatc aatagtctct ggctccaag ggaaattggg aaattcagat tgaacgtggc 300  
 tgcacatctt ttcctttcat tggctctttc agcaacagcg atccattctc gtanggggga 360  
 gagagagaga gagagagagg gagaga 386

<210> 2527  
 <211> 383  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-027-Q1-E1-B3  
  
 <400> 2527

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 tgactgggga agatggttgt ccaggagttc agagttgatc tcaacaagca ccttgttttc 180  
 cagggtggcc atcttgaaga acggtagcat caatgggttc aacaaccgat cgtttagcaac 240  
 gaggggtccac gcgtttgcgg gaatgatgtc ttggagttct tgactcacac gaggtggtgg 300  
 gctgtgccaa ctatatggct gactgttgtc agctgcctgc tcgtgaaatc tattctgatg 360  
 ggcatatcg ttcatgacgt agc 383

<210> 2528

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-B5

<400> 2528

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 aatgttcatt gggaagcaat cacggctata tcaaacttgg agcattgctg gatattcttag 120  
 ctctaagatg ttattggact gtccggagat ggcatccata ctagtatgcy atgaagactt 180  
 cgagctgctg gaaggttgtg cttgcagctt gaataagaat gctcgcacca aatgctcacg 240  
 tcgtgcggcc aagtcgcagg ttcttgtgta gttccatgcc tgttcttgac caaaagctg 300  
 caacgctcct tcaacttggt gtaattgttc gtcacagaag ctggcactag ttactagtta 360  
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<210> 2529

<211> 322

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-B7

<400> 2529

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 tgcattgaac atttcaaggc tgtggtatta ttggttggaac gtctatgctc attgggttta 180

cactttttatt tcacttttctt tgagttacac aaaagctcac gagtttgtgt atgcatattc 240  
 cgcgtaggta gtcttcatct acagaggagg ttgttttaat tttctatgca ctctacagtg 300  
 caaaaatata ttttacacag cc 322

<210> 2530  
 <211> 428  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-027-Q1-E1-A4  
 <400> 2530

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 aggcacggag tggcgagag cagacgcccg tgaaccattg tagctgtccc tgcgtcgtc 180  
 gtcgtcaacg aaccacaca aggaaggat ggagaagaag ccgaccatcc tcatgaacag 240  
 gtacgagctc gggcgacgc tcgggcaggc cacttcgcc aagggtgtacc acggccggaa 300  
 cctcgcgtcc ggcgagagcg tggccatcaa ggtcatcgac aaggagaagg tgatgcgcgt 360  
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 cgtcgtgc 428

<210> 2531  
 <211> 269  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-026-Q1-E1-G3  
 <400> 2531

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 tcgatgagca cctcatgtgg cgagatcgag ggccaccacc tgagctctgc cgccatagtc 180  
 gggcacgacg gcgccgtttg ggcccagagc accgcattcc cacagttcaa gccagaggag 240  
 atgaccaaca tcattaagga cttcgacga 269

<210> 2532  
 <211> 217  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-026-Q1-E1-G6  
  
 <400> 2532  
  
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 cctaccgggt ccatgtcgtc ctcatcggac acgtgaacca cgtgcaagtt gatccaacgg 120  
 gcctgtgcaa atacacgcat gcaacgttct agcggcgtgc agaactcgtc tggcaacacg 180  
 gcggagacgc gctgagagta tcagcgacag cccacgc 217

<210> 2533  
 <211> 342  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-026-Q1-E1-H1  
  
 <400> 2533  
  
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 atcgtcggag aggaatcgca aagagggccg tctcatccga gttaaggaag ccatggagca 180  
 caaggaggct gggtgccagg ccccgaggg acccaccctc tgcatacata actgtggctt 240  
 cttcggcagc gcggcgacca tgaacatgtg ctccaagtgc cacaaggaga tgataacgaa 300  
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<210> 2534  
 <211> 335  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-026-Q1-E1-H12  
  
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 ccaggccacc tgcgtggacg gcacgcgtcg cctctgccat atccggggca agatgcacaa 180

gaaggtgtgg atcgcgcccg gggacatcgt cctcgtcggc ctccgcgact accaggacga 240  
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 ggagcttccc cagacgctca ggctcaacga gggcg 335

<210> 2535  
 <211> 309  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-026-Q1-E1-H3  
 <400> 2535

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 cagacaatcc tcatacccaa gggcgacttc cttgtcggac aactcaactt tacaggccct 180  
 tgcaagggcg acgtgaccat ccagggtggat ggcaatctgc tggcgaccac ggacctaagc 240  
 cagtacaagg accatggtaa ttggatcgag attctacgcg tggataacct ggatcatcacc 300  
 ggcaagggg 309

<210> 2536  
 <211> 201  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-026-Q1-E1-H4  
 <400> 2536

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 acctcttcat ggaaggcgcc tacttcaccg tcaccggcgg ccagatcaac aggcagttca 120  
 acaagaagga cctcatcaag ccaggaacg gggccctac gtcaacaagc tcacgcgcta 180  
 cgccggctcc ctgcctgca c 201

<210> 2537  
 <211> 296  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB148-026-Q1-E1-H6

<400> 2537

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ctctccaaga ccatccagct ggccggctgg acagccatat gctaaatcgg gatcacggac 120  
aaggtgacgc tcgcggaatt caactgcact gggccgggca ctgacgtgac gaaccgcgtg 180  
ccatggtcgc ggaggttctc atctcgacca cacagccaag tacctcacga tcgacttcat 240  
caactgcaag gactggctgc cggcgtacta ctactgatcc gacaatcgac tgctgg 296

<210> 2538

<211> 308

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-H8

<400> 2538

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acttgcaacg tcgatgctgg ctgcgctgtt tgcggttggt ttgtgcacca ccccgctcac 120  
cttcaggtt ggcaagggat ccaagcctgg ccacctgatc ctcaccccca atgttgcaac 180  
catatccgac gtggagatca aagagcacgg gggcgatgac ttctccttta cgctcaagga 240  
gggcccgaac ggcacctgga cgctcgacac caaggccccg ctcaagttac ccctttgcat 300  
ccgctttg 308

<210> 2539

<211> 218

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-A11

<400> 2539

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tcgccttgct cttcttcgtg gcgtgtgtgg ccggcagcgt cgcgctcgcg tcgtcgatgt 120  
gctcgggatt ccgtcgcaag cgggacgcgg ccaccctgtc agaccgggcc gcttcggggc 180  
agtcgagcgg gacgggctcg ggctccgtcg ccggtggc 218

<210> 2540  
 <211> 94  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-027-Q1-E1-A12  
  
 <400> 2540  
  
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 ggcagtagcg cggcgcccgg gcgttgggtt tgtc 94  
  
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 <211> 229  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-026-Q1-E1-G10  
  
 <400> 2541  
  
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 gtccttcttc ctgcctccg ttccgttccg ttccgtcccg cccgcgcgcg ccgacgcatt 120  
 cagggatgga catgacgagg atcgccagcg ccgtcctcgt cggccccgct gtggacatcg 180  
 tggcgctctt acctgaaggt ggagacgttg gatttcatgt cttcggttg 229  
  
 <210> 2542  
 <211> 291  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-002-Q1-E1-A9  
  
 <400> 2542  
  
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 attgatctct acgacggcat cggtgacggc gaccacagtt cagtcacgga aggcggggct 120  
 cattacctcg cggtcagac gcaactggatt ccgggcctag ctgatggatg tgctatagcc 180  
 ggacaataca tcgggagaaa cttgggcggc accggcgctc ataggcaacc gcatgttctc 240  
 atgatgcgac ttctgtcttc gttgactcat ccagatgcag ttacaccgac c 291  
  
 <210> 2543

<211> 194  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-002-Q1-E1-B5  
  
 <400> 2543  
  
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 aataaagttt acagcatgaa atggattgaa aaaaagtgga agtaaataac tgaaataaaa 120  
 aggtggaagc tctataggat gacgttactg tgttgtaagc gtagatcaca aaagtcttat 180  
 ctatggggac ttgt 194

<210> 2544  
 <211> 411  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-001-Q1-E1-H4  
  
 <400> 2544  
  
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 cttatcacaa gggagcaatt catacatggg aaaactgaga tctgatttct gggggacaaa 180  
 cttcaaaata tatgatagca agccaccata tgacggcgct aaagcatcaa gtagtcgac 240  
 tagtcgtcgt ttcggaagca gaaggattag tccccaagta tcgtctggta actatgaaat 300  
 tggacaggtt tcatacaaat acaacttgct caaatccaga cgcccagga gaatgaattg 360  
 cactcttgaa tgcccttcag cgcaagagac ctgggaaaac tactcaaga c 411

<210> 2545  
 <211> 444  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-001-Q1-E1-F1  
  
 <400> 2545  
  
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gccgtcatcc tgctttctct gctcattgtg tccaccgata tggcacaggc aaggggaatgc 180  
gagaagtaca gtgagcgatt tggtggggca tgcattgatc cagacaactg cgccaatgtg 240  
tgccgcggtg agggcttctt ggccggcagg tgcagcacct tccgccgcgc ctgcatctgc 300  
actaggcagt gctaaacaag atcgctcgat cgttcgccat gcatcgacaa cctattctta 360  
ataacgttca ttatctcggt cttatttatg acgaatgtca tgtatgttct ggtgactgtc 420  
atgtatattc tgatgactgt catg 444

<210> 2546

<211> 335

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-C3

<400> 2546

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ggcctgctgc ttctactact ggccggcgcg tgcacagcga cggcgcatct caccgtcggc 120  
gatgtggatg agtacgtgtc caagcgcacg caggagtccc gccacaggaa caacggtggc 180  
gcgggcatcg atgacctcat ctccagtgcg gcgcgcttcc acgccaacgt ggatgcacgc 240  
gcctatggcc gtagatccga cctgcaggac gaggcaacag ctaccgtaat agccaaagcc 300  
gaagcacaag aggcttcagc tgaaggtggc gatta 335

<210> 2547

<211> 146

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B11

<400> 2547

cctcgccgct cctcgccgcc gccgcctccg ctgcctgggt cctcgccgcc ggggccccgg 60  
cgcccgtcct caccagcgcc tctcgggtcg cgttcccggc cgtcgccgcc gtgctgggcg 120  
cctccgtgct ctccttcttc gcctac 146

<210> 2548

<211> 376

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-001-Q1-E1-B4

<400> 2548

gcacgacgag gacgaagccg tgcccgaagg aaaaagacgt ggcggttgta agggaggatg 60  
tggaagcgga tgcggagaca gagacagaga ctgaaagcga ggctgaggca gaggtcgagg 120  
ccgangtgga cgtcgagggtg gaagcggaag ccggtgcatc gtctgcgaag aagaaccgta 180  
tccagggtgtc caccaacaag aagccgctct atttctacgt caatctcgcc aagagggtaca 240  
tgcagaacta cgacgagggt gagctctccg ctctggggat ggccattggt aacctgggta 300  
acgtcgctga gatcctcaaa aacaatggcc tcgccactga aaagaacatc ctcacatcaa 360  
ccatcggcac caatga 376

<210> 2549

<211> 341

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A12

<400> 2549

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tcaaggtgac ggcgacaaca gttcagtcgc ggcaggcggc gctcagtacc tcccgcacaaa 120  
gatgctctgg attccgagca tgacggaggg atgtactgtg gccggacagg acagctgggtg 180  
aagcttgggc gccaacggag ccaaattgtca aaggcaacgt cgcattgagg cacttcgggtc 240  
gtcgttgact catccacatt cagtcacacc cgtccaatcg acatcgtttc atgacagatc 300  
gaccagctag ttaacatttc ccatctcact ggcgtgtggt a 341

<210> 2550

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A4

<400> 2550

ccgggtgccc ccacacgtcc gagcaaacct ccgatccctg ctgcgagcaa gggatggcgg 60

cgccatgggc agtgctggcg gcggctctcg tcgcggcgca ggtggcgctct gcggcgccgg 120  
 tcacggcgcc agcgttcctc tgggcgccta agaactacgg attccgctct gatgatgcta 180  
 aggaggtagt ccattatcaa acaatctcac caaagaactt agctaaatct gttcttgagg 240  
 aagggtggctg gtcaaccttt atgtgttcaa gggaggatac tgagaagcat gttgatgttg 300  
 ccattgtttt tattgggtca aagctacaat catcagacat atcgaaagat aagcaagttg 360  
 atccagcttt agcagatata ttgaagctct ctttcacaga atcagagttt tctatggcat 420  
 tccccacgt ttccacatca gacga 445

<210> 2551

<211> 511

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G8

<400> 2551

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 catgagaatg ttgtccaact cgtcggatac tgcccggaag ggagcaccca cgtccttgct 120  
 tatgagtatg caactagggg atcattgcat gatatactcc atggtaataa ggggtgtcaaa 180  
 cgagcccatc cagggccagt cctgtcatgg atgcatcgag ctaggattgc cgtatgtgct 240  
 gctcggggtc tcgagttcct ccactagaac gccgatctc atgtgggtcca ccgcgacatc 300  
 aattcaagca gcatactgct ctttgaccat gatgttgcca acatcgggga cttcgacatc 360  
 tcaaaccagt cccctgacat ggctgcgcgc ctccactcta ctgcggttct tggcaccttt 420  
 ggctatcatg caccagaata tgccatgact ggacagctta gcacgaccag tgatgtctac 480  
 agctttggag ttgtgctgct ggagctttta a 511

<210> 2552

<211> 504

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H1

<400> 2552

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cacactgcct ccgcatgcgg caagatcctc cctcattccc caaacatgag aggagcagag 120  
 gaggagagat ctggcgccgc cactgatgcg ggaggagagg aggagaaacg ggagaggagc 180  
 gtccgcctga tggccggcct catggacaag gccaaagggt tcgtggtgga gaaggtgacg 240  
 caaatcccca agcccgaggc tgcgctggat cacgtctcct tccagagcat cagccgcgag 300  
 ggcgtcgagc tgcatagcc a cgtcgacatc agcaaccct actcgaccg catccccatc 360  
 tgcgagatca cctacacgtt caagagcgcc ggcaagggtga tagcgtcggg cacgatgccc 420  
 gaccccggtt ggatcgggc gagcggcagc accaagctag acctgccggt gaaggtgccg 480  
 tacgacttca tcgtgtcgct gatg 504

<210> 2553  
 <211> 486  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-049-Q1-E1-H10  
  
 <400> 2553

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 cgcgcgcgga gcggatcatt gcggagggtga tgcacacgaa gcagatggcg aacccgacga 120  
 cgcccgcggg cctgctccgc gtcacatcc acgactgctt cgtcagcggg tgcgacgcgt 180  
 cgggtgctgat cgcgctccacc cagttccaga agtcggagca cgacgcggag atcaaccacg 240  
 ccctccccgg ggacgccttc gacgcctggg tgcgcgccaa gctggccctg gagctggagt 300  
 gccccggggt ggtgtcctgc gccgacatcg tcgcactggc gtcgggcgtg ctgatcacca 360  
 tgaccggcgg gccccggtac ccggtccgc tggggcgcac ggactcgctg tcgtcgctgc 420  
 ccacggcgcc cgacgtggag ctgccgcacg ccaacttcac cgtggaccgc ctcatccaga 480  
 tgttcg 486

<210> 2554  
 <211> 309  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-049-Q1-E1-H11  
  
 <400> 2554

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 cgactccgtc agcatccccgc tgccgcggtg ggccgcggag gagatggaga gggaccagga 120  
 cctctgtac accgaccagt ggggccgcgc caactacgag tacgtctcgc tcggctgcga 180  
 cgccatgccc gtcctcaagg gacgcaagcc cgtcgagtgc tacaacgact tcatgcccc 240  
 gttccgcgaa cactttgccc actacctccg caacaccatc ctggaaatcc aagtccgcat 300  
 gggccccgc 309

<210> 2555  
 <211> 498  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H2

<400> 2555

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 gcatcccgtt gtcgacgcag gtgcgtact tcaacggcac caaggcgaag atggtcgcca 120  
 agaagggcgc cgccgcggtg agcaagctgc tggccgactc cgtcctcctc atgggcatcg 180  
 ccaacaacga cctgttcgtg ttcgctgccg ccgagctgtt gcggggcagg tcggccgcgg 240  
 agcagaagag cgacgccgcc gcgttctca ccgacctgct gtccaactac tcggccgcca 300  
 tcacggatct gactccatc ggcgcgagga agttcgccat catcaacgtg gggctggtgg 360  
 ggtgcgtgcc ggtggtgcgg gtgctggacg cggacggcgg gtgcgccgag gggctcaaca 420  
 agctggctga agccttcgac gtcgcgctgg ggccgctcct cgccggcctc gccgacaagc 480  
 tgccggggct gacctact 498

<210> 2556  
 <211> 472  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H3

<400> 2556

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 ttgggaaggt ggacgagtta tttatcgaca tatatgacag atatgaacct accaatgact 120



catcagcaga caattgtttc atctcaacaa gttatgatgc cacaacacac tttgagtcca 180  
ctgttatgga tgtactttcc ctttacacaa agatcaccgg aaagactggt gatctcagcg 240  
tggatctaag cgctgctagt gctgctgaag atgatatgtg atacttatcg tagtgctatg 300  
tggcgtagtg tggaaaatat ttaattaagc tttgctttgg caacgattat taggttcacc 360  
tttatttttc caattgttgt tattagctgt gttgtgacca tgattaaaga ttgcatgctg 420  
taaatttgaa ggcatttttt tatcaaaagt tgttacgcgg tgattcgtgt tt 472

<210> 2557  
<211> 312  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H7

<400> 2557

aacaccctat agagagtcgt attaaatagc aagtgtgatc atccgttgat ccatcttgc 60  
aataaccctg cgtgcccttc gttctcgtct cgatcccgac gacgctccct tcggctccgg 120  
caaaccacat caagtcgcga tggagatgaa gaaggtcgcc tgcgccgtcc tcgccgcgc 180  
cgctccgcc accgtggtcc tcgccgccga ggccccggcg cccgccccca ccagcgctc 240  
ctcgccgcgcg ttccccggcg tcggcgccgt gctgggcgcc tccgtgctct ccttcttcgc 300  
ctactacctg ca 312

<210> 2558  
<211> 482  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H8

<400> 2558

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tccccccagg caagaacatc acggccacct atggcaagga ctggctggac gctaaagcga 180  
catggtatgg caagccgacg ggtgccggtc ccgacgataa cgggtggcggc tcggggtaca 240  
aggacgtgaa caagcccccc ttcaatagca tgggcgcgatg cggcaacatc cccatcttca 300

aggatggtct gggttgtggg tcctgcttcg agattaagtg cgataagcct gtggagtgt 360  
 cgggcaagcc cgtggtggtg cacatcacgg acatgaacta tgagcctatc gcggcgtaacc 420  
 acttcgattt agcaggcaca gcgttctgcg ccatggtcaa caagggcgac gaggagaagc 480  
 tg 482

<210> 2559  
 <211> 447  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H9

<400> 2559

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 gtgtacctgc agatcatcca aatgagaaga cttttgtggt gggatttgag gaagtccatg 120  
 aatcagatgg ttcgccaggc tcgcatggac aatctacaaa ggacagcgcc ccttctgcga 180  
 acggtggtgg ggcagcaaag agcaactaca tatcgcccgcc accaacacgc atcgctgtcg 240  
 accgcaacgg cagtgtgaag aatgcttccg tcgctagggc caacttgaca tctcctcggc 300  
 catcagagat catctctgcc agggacagca attccacgac ccagcaagaa gtgaaagcgc 360  
 tcctctctca gatgtcatct gtgcgggggc tcgatggttc ttccagtga ggaatctcta 420  
 gccccgggta cagcgctccg aacgaag 447

<210> 2560  
 <211> 412  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-A3

<400> 2560

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 gctccgacga ctacgacgcg ccgccacagc cacatggcgg acgacgccgt cgcgcgcgg 120  
 gcggccgttt gctgcgcagg gccgggctcg ctgtcttcta tcacgaagca gcagcagcag 180  
 cccgacgacg ccggctgcgg cagcagcagc agcgacgacc actaccagca cgacgtgatc 240  
 atgctgaggc ggactaggag cgggcgggca ttcccgcgcg cgatctccgt gatcggcaag 300

ggcgggcggc cgtggctctg cctgcgggcg caccgcgagg gtggacgcct cgtgctgcgg 360  
cagatgcgcc tgccgtcgca ggagctgctg catccctgca aggacgacgg ca 412

<210> 2561  
<211> 400  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B11

<400> 2561

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ccccggcaag cgaagcaact cctcgcatgt ctccatcaag aacgtcacct tccgcaacag 120  
cggccggcac gtcgtccacg cccgaagccg tcagcctgct ctgctccgag acgcagccgt 180  
gcagcggcgt ctcgctcatc gatgtcaacg tcgagtacgc cggcaagaac aacaagacca 240  
tggctgtgtg cagcaacgcc aaggggaaccg ccaaggggaag cctccaggcc ctggattgcc 300  
tcgtctgacg gatgacctg catttgcatg cattcttctt ccgtttcact ttcccatatt 360  
ctattgcgtt ccagccaagc atcttgtttc ttttagatat 400

<210> 2562  
<211> 412  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B6

<400> 2562

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tccattctcc agcgcagcga agtaaacadg tctgaccggg caaagatgtc gtggcaggcg 120  
tacgtggacg agcacctgat gtgcgagatc gagggccacc acctcgcggc ggcggccatc 180  
gtcggccacg acggtgccgc ctgggcgcag agcacggcgt tccccgagtt caagaccgag 240  
gacatggcca acatcatgaa ggacttcgac gagccagggc acctcgcgcc gacaggcctg 300  
ttcctcggac ctaccaagta catgggcacg caaggccagc ctggtgccgt catccgtggc 360  
aagaacggat caggaggcat caccgtgaag aaagacaggc aggcactcgt gg 412

<210> 2563  
 <211> 397  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-050-Q1-E1-B8  
  
 <400> 2563  
  
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 tccgacgacg acgacgcgcc gccacagcca catggcggac gacgccgtcg ccgccggagc 120  
 gggcgtttgc tgcgcagggc cggcctcgct gtcttctagc aggaagcagc agcagcagcc 180  
 cgacgacgcc ggctgcggca gcagcagcag cgacgaccac taccagcacg acgtgatcat 240  
 gctgaggcgg acgaggagcg ggcgggcatt cccgccgccg atctccgtga tcggcaaggg 300  
 cgggcccgcg tggctctgcc tgcgggcgca ccgcgagggt ggacgcctcg tgctgcggga 360  
 gatgcgctg ccgtcgcacg agctgctgga gccctgc 397

<210> 2564  
 <211> 451  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-050-Q1-E1-C10  
  
 <400> 2564  
  
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 gcggaggcag aggtcgaggc cgagggtggag gtcgagggtg aggcggaggc cgggtgcatcg 120  
 tctgcgaaga agaaccgtat ccagggtgtg accaacaaga agccgctcta tttctacgtc 180  
 aatctcgcca agaggtacat gcagaactac gacgagggtg agctctccgc tctggggatg 240  
 gccattggta ccgtggtgac cgtcgctgag atcctcaaga acaatggcct cgccactgaa 300  
 aagaagatcc tcacatcaac catcggcacc aaggatgagg cgaatggccg gcttgctcgt 360  
 aaagccaaga tcgagatcct gctgtgcaaa tcagaaaact tcaacagcat catgtcgagc 420  
 aagaagtccg agcgcgccgaa gccgcccgc g 451

<210> 2565  
 <211> 449  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C11

<400> 2565

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ggaggagggg accaggccga gggcaggagc ggtgccgagc agcagcagcg cggcgccgcc 180  
gctcggcatg gcagcagtgg ggagcaccag gtgcacgacg tgacaccgag gccgtcggcg 240  
cccgcgctcg gcatggggtg gcggcaccca gcgatgtcga cggccgtggc ggagccggcg 300  
tcccttgtgc cttattcca gtgcagtg gcgttgagg tgcgcaacgc gcagcagtga 360  
gggggaatca tttgtcaac caagcagcca tgcccatagt gcgctcgagc tcgtgtcac 420  
gacaggcgcc gctacgatgt gagaagacg 449

<210> 2566

<211> 462

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-050-Q1-E1-C12

<400> 2566

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tcggccacga tctcttgca aaaagcttac cctgtgtctg tctgtccgac cgtcagtcgg 120  
tctaacaatc gatttccatg acgacgtcgc cgcgcgtgtg gctgtcgcc atggcactgg 180  
cgctcgctg cgtgtgtctc gtgaggtccg ccgacgtgc tgccgaggcg tcnccgactc 240  
caggcggctc cacctacggg tgcaaccgg ccacggacaa gtcgtgcaag cccgagggcg 300  
tggggggtgt gctgccgggc ggcgcatcg acctcgacgg cgacggtgac gaagacgagc 360  
tgccgcagtt ccagccccac ctcatgatcc tcggccatgg ccactgatga gtgtaaatgg 420  
ttggttggtt ggtcgtcctc agccgatcta ctggacgaca cg 462

<210> 2567

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C3

<400> 2567

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cagagctcag ccaattgcag taccggccat tcatctggaa gagctgaagg aaattacaaa 120  
aaacttcagc agtgatgcc tcattggcga gggctcgtat gccagagtct attttggtgt 180  
gctgaaagat gggacgaaat ctgcagtga gaagcttgac tccagcaaac agcctgatca 240  
agaattcctt gtgcaggttt cagctgtctc aagattgaag catgagaatg ttgtccaact 300  
cgtcggatac tgcgccgaag ggagcaccgc cgtccttgct tatgagtatg caactacggg 360  
atcattgcat gatatcctcc atggtaaaaa aggtgtc 397

<210> 2568

<211> 364

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C6

<400> 2568

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gaaatcaagg acctgcaaaa actatctgac gagctccatc tcaaagataa taagggtgcta 120  
cagaggatct ccaagctgcc catgcttcgt tccctcatta tcgatgactg ctcaaagttg 180  
aagcatgtgg caggtcttga tgcgctgcag cacctcagac ttgtctttcc tccgtccacc 240  
gagacatttt atttcgaaga gctagtaatt ttctggagcg ttgccttccc acgggtggctg 300  
gagctactga ttcagaagtg caaaggcctg cgacggtttg agttgcagtg tcgtctgtca 360  
ttgc 364

<210> 2569

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-D10

<400> 2569

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atggcggttca tcagcaatat cgcagtgaag gcggcgggcg tggccgcgct gctgctggtc 120  
gcagcggtgt cgccctgccgc gcgcgcggcg gcggtggcg tggcgggagg ggcgcgctcg 180  
gtgccggcggt gtccgctgga catcgcgag ctgggcgcca agggcgacgg caagtcggac 240  
agcaccacca tgatcctcaa ggctggaag aacgcgtgcg aggcgacggg ggtacagaag 300  
atcgatcatcc cgccgggcaa ctacctgacg ggccgggctgg agctgaaggg cccctgcaag 360  
tctccatca tcatccgtct cgacggcaac ctgctcggca ccggcgacct cagcgcgtac 420  
caaaggaact g 431

<210> 2570  
<211> 448  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-050-Q1-E1-D12  
<400> 2570

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gtggagagca gtggcggcgg cggcgacggc agcgcgggga gcgacgaggc ggcacgctcc 120  
atgttccaga ggttctggga ctccgccatg gccttgggcc ccctggacga cgagacggac 180  
accagtccc agatgagcga ggctcagagg tcgcagatga tgatgtccga tgtccaccac 240  
caccaccacc accacgactc cgccggcggc ggcagcaggg cggggttctc gctgtcgtcc 300  
ttctccttca agtccagga caggcgaagg cggatgcacc gcttcagctg tgagggttcag 360  
agcttgacgc ctctggtgac ctgcatcctg cggaggctcg gcgccgacat cgaccctgac 420  
cgccctaccgc aaatcctgta cgaagacg 448

<210> 2571  
<211> 418  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-050-Q1-E1-D7  
<400> 2571

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catggcgtag ccttcggtca attcctggcg gcatttcgcy gcggcgcaag gatccggcct 120

gcgcggctcc gcggcggtgc cagcacgcga ccccgcggcg gcgggcgggc acggccttgg 180  
 cgcggtcccc ccacgcatcc tggcgcccc gacggccagg gcgcggccca ctggcgcggtg 240  
 gccggccatg gcggcccctg gcggcgcggt cccgcacggg tgcgtcgccc gacggcctgc 300  
 gcgctgccgt cgctcggtc agacgggcct cggtcagcgc gggcaggcac gacgagcgcg 360  
 tgcgggcggc ctctccggc caaggcggcg cgtctcgtgg cccaggccat gggcgccc 418

<210> 2572  
 <211> 432  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-E1

<400> 2572  
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 tcagcatcct ttcgaagaag taacacttct ccgtgaggcc tgagcccctc gccgcggtga 120  
 gccaaagccgg cgcacgtcgc cccggggctc acgctcacca ccgagcccca accaattaat 180  
 aatatatata tatagctagg atcgatcgtc agtaaaatgg caggctccgc cgtcctgagg 240  
 agccccctgt ccgtcctcct ctacatcctc gccgccgtgc ccgccaccgc cgcggcgacg 300  
 ccgaccgacg ccgccatcga cgaggcgtag gcgcatctcg tcaacctcac cgctaaccag 360  
 gagtactggg cggagcgcg gcggggcgcg cagcggtaca accgcgcggc gtaccagacc 420  
 gaccctgggc cg 432

<210> 2573  
 <211> 404  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-050-Q1-E1-E12

<400> 2573  
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 gattgcccgg tgetgcccta caacacgtgc cagagcccca gcaaggcana gtcgtgcagc 120  
 tacttccaga agacgcagga cggcacggtg acgatcggca tctaaggga aggagaaggc 180



gacggtgacg gtgtcggacg ggcggatggc caagctcccc ggtctcatcc tgggctgctc 240  
 cgctcctggaa gccggccgca gcgtggacgc ccacgacggc gtgctgtcgc tggggaacgg 300  
 cgacatgtcc ttcgccgtcc acgccgcca gcgcttcggg cagcgcttct ccttctgct 360  
 gctcagcgcc aacagctccc gcgacgctc cagctacctc acct 404

<210> 2574

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-E5

<400> 2574

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 cacaagcatg tctggcatca tcgacaagat ccaggagacg ctccacatcg ggggcgacca 120  
 caaggaggag cacgagcaca agaagggcga ggagcaccac aagaagggcg aggagcacca 180  
 caagaaggac gacggggagc acaaggaggg catcgtggag aagatcaagg acaagatcac 240  
 cggcgagcac ggcgacaagt cgggcgacca caaggacaaa gaccataagg agaagaaaga 300  
 taagaagaag aagaaagaga agaagcacgg cgagggccat gaccatgggtg atggtagcgg 360  
 cggccacagc agcagcagca gcgacagcga ctgatctcgc ctgcgcgagc cccgtgcgca 420  
 cat 423

<210> 2575

<211> 278

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-F10

<400> 2575

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 ggggcactcc tagtggcagt cgccgctgta tccgcgttcc tcgcggtgcc ggctcggct 180  
 aagtccgggg aactgagcac gataggggtg ctggcagcga aaggcagcag aggcaccggc 240  
 acgcagaaat gcacgggagc cctgtgctac tgctacgt 278

<210> 2576  
 <211> 295  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-050-Q1-E1-F4  
  
 <400> 2576  
  
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 catgcaggtc tttccaaggc gtacgtacta tatcaaatta ttttaatttc cttacatgta 120  
 tatgtatgtg ctgctgttgg atacgtacgt atatatatat gttctagggg ttccggttcc 180  
 ggccttggtta catgcatgaa gagaagaaac acaatgaata aggcctttat tgattgtgtt 240  
 tcttctcttc atgcatgtaa cacaatcaat aaaagcctta ttcatttatt atgta 295

<210> 2577  
 <211> 436  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-050-Q1-E1-F5  
  
 <400> 2577  
  
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 gaaggctcag aggagaagaa ggcgagacgt gcagtcctgc gggcacgat cgagaacagg 120  
 gaagcaagag gctgctagag atcgagctca tcaaccaacc aagtcgtacg tcgtcagcat 180  
 cagcaccgga tggcgctgct cgcgtccagc tatgtatcca ggaggggggt ctccgcagcg 240  
 atgacggtgg cggaggagtc cgtgaagaag gtggaggaca aggcggtgaa gctgggaact 300  
 gtggccaagg acatcgccag cgccatggcc accacgacgg aggagaagac ggcgttcttg 360  
 gaacctgacc ccgagaccgg atactaccgt ccggtcaccg gcacgaagga ggtggacgcc 420  
 gccgacctgc gcgccg 436

<210> 2578  
 <211> 402  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-050-Q1-E1-F6

<400> 2578

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gagccgcagc atggcatcat cggccgcgct cttggtgcta gccctcgcgc tagtggcggc 120  
caccgcccc aaggtagcgg aggcaaagaa gaagagagcg gcggagagcg gcgaggcggc 180  
ggaggcgaag aagatccagg acgacttctg ctgcacgctg tgcgagggca agaaggggac 240  
ggacctggtc gtgtgcaagg agtcctgcgc gctctcccag cagtccaacc tgggtgctgta 300  
cggcaggatc cagtgcgaagg gcaagtgcac cgagcagaag ggcatacagg cgccggccat 360  
gaaggtctgc caggaggagt gcgacaaggc gtacgtggtg aa 402

<210> 2579

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-F8

<400> 2579

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gccaggagga gtgcgacaag gcgtacttgg tgaaggcggc cgaggtcaca aaggcctgaa 120  
ggttcacttg cgcaaaggag aagaaccgc gcttcagcaa aaattgcaaa aggtcttgca 180  
ccccctctcc tcctgaagcc aaacccttg aatgaatga accccatgca tgcattgcatg 240  
catgtatgca tgcgcggggg tgacgtggcg ttcagctcag gcgctgagcg agtctatacg 300  
tacgtcgtca ccggtggcc acgcatgca taaccatctg atatggacgg aactatatat 360  
tgtattccta ttaatctggc attttctaag ctaattgtt tttttccaaa taatacgtct 420  
catgaactca aaatttaatg tcac 444

<210> 2580

<211> 250

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-G1

<400> 2580

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gttccgctat atctcagcca tcatgggtgc aaatgatgct gaaatgcaca ctgggttccc 120  
gactgatcta actcaagtag tacatactgg atgagatcga cctcgatcca cgaacaacac 180  
caacactaac aacaccaaga ccactactgg acagacacct aactggatga aagattacca 240  
ctcggcaccg 250

<210> 2581  
<211> 351  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-050-Q1-E1-G11  
<400> 2581

cggggcgacc cacgcgtccg aagacgcgtg ggcggacgcg tgggggacga cgcaccgcac 60  
actacccgac ggtggaactc ctgcccgcg tcgctgctcc ggtctccgcg ctgctagccg 120  
ccgactgtag gggctgtgtg cttctgaaga gagatttcgt tgaacaggat gaatgcattg 180  
gcagcaacca gcaggaactt caagcaggca gctaagctgc tgggcctcga ctccaagctg 240  
gagaagagct tgctcattcc attcaggagg attaagggtt aatgcacaat cccaaaagat 300  
gatggaactt tgggataccta tgttggttt atggttcaac atgataaatg c 351

<210> 2582  
<211> 333  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-050-Q1-E1-G12  
<400> 2582

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ggaagctgtc gacgaagctg ggctcaatat atatgtctgc tgttcaccat ctgagccaag 120  
ggaagccggt ggtcagaacg agctcaatga ggctgctgtc gtcggtgaaa cgacgactga 180  
accgaaggag ggctaggatc aagccaagat aataaagcaa gtcgactgct aaactgcac 240  
aaaagaagtt gctagtactg gggccgattc aatggacgat gccgctacta tggaaacgcta 300  
gccgctggta tcatcagcat cagcaccaca aga 333

<210> 2583

<211> 377  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-050-Q1-E1-G6  
  
 <400> 2583  
  
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 atgacgatga tgactccacc aactgaggcc acacatgtcg gcccggttaa atttgaaca 180  
 agacatggaa gaaaaatgag agcaatgtct ttaaaaccat gaatccataa taatgtgtgg 240  
 tcatccatgg atacatcctt gctctccctc tttttctttc tgtttgattt tcaatgtgtt 300  
 atcatgttgt tagttaactg tatcnactca tggatatcaag gtctaaaaaa ttatcgtcgt 360  
 tcttgtgttc ttgagcc 377

<210> 2584  
 <211> 454  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-050-Q1-E1-H1  
  
 <400> 2584  
  
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 ccattgacca acaattaagc ctccccgacc gccacatcta ttaggtgcag ccatgggtgc 120  
 ctgtgcaacg aagcctaaga cgcttgaggg gaaagcccca gctgaggcca ccatctccac 180  
 acccaagggt gcacctgaga ccactaccat ccacattgag gttgcggcaa aacatgcagt 240  
 agttgagaag gtggaggagg acaaggagga ggcactaaca gtggcggcga aacaagagcc 300  
 agcagccacc attgagcctc agcagattgc tagtgaggtg accacttcgg aagtggcgg 360  
 cgtcgttgtc gagcctgaga acaaagagga ggaggaagtt gtggagaaga ccgtcatcga 420  
 gaaggagaag ccatcagcag tccatgcaga agaa 454

<210> 2585  
 <211> 422  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-H10

<400> 2585

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ggggcaggcc ccagctgagg ccgccgtcgc cacacccaag gttgcgcccg aggccactcc 180  
aatctccgtt gaggttgagg ctgatgaaca ggtagctgag aaggtggagg tggaggagcc 240  
ggctgcggcg gccgacgttg agcatcagaa ggctaagtag gtggctcgtc cagatgcggc 300  
cgtcgcggag ccgatcaca aggaggagga agccgtggag aagaccgtcg tcgaggagga 360  
gaagccagcg gcagccgcca atgcagagga aaaggtcgcc accgccgccg agaccacgac 420  
ga 422

<210> 2586

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-H12

<400> 2586

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aagaccgggc tcaaggtcca ggccgtcatg tccttcaacc agttgcggcg gcaacttcgg 120  
cgattcagtc accataccac ttccgggatg ggtcttggag gagatggaca aggaccagga 180  
cctggcctac accgaccgga gtggccgccg gaactacgag tacgtctccc tgggctgcaa 240  
cgcgatgccc gtgctcaagg gccgcacccc catccattgc tacgccgact tcatgcgcgc 300  
cttcggcgac aacttcgcca cttcatggg caacaccatc gtggagatcc aggtcggcat 360  
gggccctgcc ggcgagctgc gctacccgtc ctacccggag agcga 405

<210> 2587

<211> 395

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-H6

<400> 2587

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aacagccagc tcgcgaaaat aatgaagagc cgcagcatgg catcatcggc cgcgctcttg 120  
gtgctagccc tcgcgctagt ggcgccacc gcccacagg tagcggaggc aaagaagaag 180  
agagcggcgg agagcggcga ggcgcgagg gcgaagaaga tccaggacga cttctgctcg 240  
acgctgtgcg agggcaagaa ggggacggac ctggctgtgt gcaaggagtc ctgcgcgctc 300  
tcccagcagt ccaacctggg gctgtacggc aggatccagt gcaagggcaa atgcaccgag 360  
cagaagggca tcacggcgcc ggccatgaag gtctg 395

<210> 2588

<211> 270

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-H8

<400> 2588

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ccagaagtta tccttgggtct tgggtggaac tatccatgcg acttgtggag tgtgggttgc 120  
attttagttg agctttgttc gggggaagct ctctttcaaa cacatgaaaa cttggagcat 180  
ttggctatga tggagaaggt cttaaggcct ctcccaaagc atatgattgt cagagctgat 240  
cggcgtgctg aaaaataactt caagcgcgga 270

<210> 2589

<211> 326

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A1

<400> 2589

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ggcggcaata atgggtctcg ttccagctcc ggcgacgacg accgccgccg taatcctatg 180  
cctatgcgtc gtcctctcct gtgccgcggc tgacgacccc aacctccccg actacgtcat 240  
ccagggccgc gtgtactgcg acacctgccg cgccagggtc gtgaccaacg tcaccgagta 300

catcgcgggc gccaaagtga agctgg

326

<210> 2590

<211> 438

<212> DNA

<213> Zea mays

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<400> 2590

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cgaacgcgcc cggcggggcg ttcagcaact ggggtggcgat gaaccagcag agctacgcgc 180  
tgtacgcgca gaagtccgtc ggggacgggg gcaaggagcc cctggacaag aagctgtcgg 240  
aggcggagaa gaacaaagtc acgtacgtgg tggaccccag cggcaaaggg cgactacacc 300  
aacatcacccg cggcgctgga ggatatcccg gtgagcatca ccaagcgctg gatcctggat 360  
ctcaagcccg gcgctcagtt ccgccagaag ctgttcctga acatcagcaa ccggttcac 420  
acgttcgggt cggacccc 438

<210> 2591

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A11

<400> 2591

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ggcgccggcc tcgctgtctt ctagcaggaa gcagcagcag cagcccagcg acgccggctg 180  
cggcagcagc gacgaccact accagcacga cgtgatcatg ctgaggcgga cgaggagcgg 240  
gcgggcgttc ccgccgccga tctccgtgat cggcaagggc gggcggccgt ggctctgcct 300  
gcgggcgcac cgcgaggggtg gacgcctcgt gctgcggcag atgcgcctgc cgtcgcagga 360  
gctgctgcag ccctgcaagg aacggcaagg gaatgatagc tagcgctcct aattgatcag 420  
ctgatcagat gatctgccgc c 441



<210> 2592  
 <211> 428  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-051-Q1-E1-A12  
  
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 acctcctgct ggtgccaggg cggggagggc gtcgcggagg tggcgcgcat ggggctcgcc 180  
 ggggacgggt cggcggacac cgcccacctc agtaataatg aaaatgggcg gttcatttat 240  
 ggagttgcga gttctcctgg taaaagagca tcgatggagg acttctatga ggcaagaata 300  
 gacgacgttg atggagagaa aattggaatg ttcggtgtat atgatgggtca tggaggagtc 360  
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<210> 2593  
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 <213> Zea mays  
  
 <223> Clone ID: LIB148-051-Q1-E1-A2  
  
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 tcaggtctaa gttttttttg gttttgtgag ttatccaaag ttggaccgca aagatgagta 120  
 ctgctaataca ctatcagcac atcaagtcaa ccaagcctgt tgtagatcta ctaatattgg 180  
 agtgtttctt tgcttaaaat gtggagatgt tcatagggca cttggacctg acatttcaaa 240  
 ggttttatct gtaactttgg atgattgggtc tgacagtgat atcgactcca tggttgaggt 300  
 tggtggaac tcatatgcaa attcaattta tgaggctttt cttccaaaag atcacccaaa 360  
 acccaaacca gattcaacga tggaatatag gacgaaattt ataagagcta agtatgagac 420  
 ac 422

<210> 2594  
 <211> 390  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-051-Q1-E1-A3

<400> 2594

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 cgcccgacg acgtaccggt tccgcatgtg caacgtgggc atcaaggcgt ccttcaacgt 120  
 ccgcatccag gaccacatca tgaagctggg ggagatggag gggtcncaca ccatgcagaa 180  
 cgactacgac tcgctggacc tccacatcgg gcagtgcctg tcgttcctgg tgaccgcgga 240  
 ccagaagccc ggcgactacc tgctgggtggc gtccacccgg ttcacaaagg agaagagcag 300  
 caccacggcc gtgatccgct acaagggtc cagcgccccg ccgccggcca agctgcgga 360  
 gggccccagc ggggtgggct ggtccatcaa 390

<210> 2595  
 <211> 383  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A4

<400> 2595

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 ggcgccgagc gtgatctccg tccgtgccgc catggcctcg caccgggcgc tgctgctgca 180  
 gctcctcgcc gcagcgctcg tcgctgcgct ggcctctgtc gcatccgcg acgacgcaa 240  
 cgccatgccc accatcctga ccccggtggc gcataccccg ctggggctct tcgacggcga 300  
 caagccggcc tctgacgatg acgccgtcga cgacgacgat gacgccgcc ctgtcggcgc 360  
 gcccacggg gccaccatga ctg 383

<210> 2596  
 <211> 381  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A5

<400> 2596

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tactccgcac caatcctagg tgcgggcagg ggttccagcc gcttcttcgc ccacacgccc 120  
gctcgcctcg aatactccgc accaatccgt gtcggaccgg tacgtgtgcg agatctgcgg 180  
gcaggggttc cagcgcgacc agaacctgca gatgcaccgg cggcggcaca aggtgccgtg 240  
gaagctgctg aagcgggagg ccggggaggc ggcgcggaag cgcgtgttcc tgtgcccgga 300  
gccgagctgc ctgcaccacg acccctcgca cgcgctgggc gacctcgtcg gcatcaagaa 360  
gcacttccgc cgcaagcaca g 381

<210> 2597

<211> 361

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A6

<400> 2597

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cggtagaaaa tggccgatgc cgaggatata cagcccctcg tctgcgacaa cggaactggc 120  
atggtcaagg ctgggttcgc tggcgacgac gccccgagg cgcgtctccc cagcatcgtg 180  
gggcgccccg gccacactgg tgtcatggtc gggatggggc agaaggacgc ctacgtcggc 240  
gacgaggcgc agtccaagag gggatatctg accctcaagt accccatcga gcacgggatc 300  
gtcagcaact gggacgacat ggagaagatc tggcatcaca ctttctacaa cgagctccgc 360  
g 361

<210> 2598

<211> 398

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A7

<400> 2598

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ctccggcgac caccggcctc cctctccgtc ctctagcgac cgaccaacgc gccgagcgaa 120  
gatgtcgtgg cagacgtacg tggacgagca cctgatgtgc gagatcgagg gccaccacct 180  
cacgtcggcg gccatcgtcg gccacgacgg cgccacctgg gctcagagca ccgcattccc 240  
cgagttcaag cccgaggaga tgggtgccat catgaaggat ttcgacgagc cggggcacct 300  
cgccccgacc ggcctgatac tgggaggcac caagtacatg gtcatccaag gcgaacctgg 360  
agctgtcatc cgtggcaaga agggatcggg ggcatcac 398

<210> 2599  
<211> 402  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A8

<400> 2599  
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tgaaaaaagt tgtttgtgaa ttgtaaactg tggaaaaagt tgttgtgggc tgtgagctgt 120  
taaaaaacta caaatgtttt ggtggaaact actaaaagtc gttaaaagtt cttcgatata 180  
tgttttcaca gttccatcta aaagcaggta cataggtgct ttgaggtcaa agtgggttga 240  
gtcgggggcg acgcggttct ctcaattttt tgggatcaag cctccaccaa aaactactcc 300  
gggttttacc tcgtccctac gtgaatctca tccaaacact attggaattg tggccgccct 360  
attccatccc tccatataca tccaacaaa cattattgtg tc 402

<210> 2600  
<211> 394  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-G2

<400> 2600  
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aataaggtcc cgcccttttc cgacattcac agggggggaca ggaaatcagc ggccatggcc 120  
tcgattccgg cgacgacctt cgccgtcatc ttatccgtcc tcttctgtgc cgcggctggc 180  
accgccgtcg acaacgacct ccccgactac gtcatccagg gccgcgtcta ttgcgacacc 240

tgccgcgcgc ggttcgtgac caatgtcacc gagtacatcg cgggcgcgcaa ggtgaggctg 300  
gagtgaagc acttcggcac cggcaagctc gagcgctcca tcgacggggt gaccgacggg 360  
aacggcacgt acacgatcga gctcaaggac agcc 394

<210> 2601  
<211> 377  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-035-Q1-E1-G3  
<400> 2601

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cctcgtggtc cgagcgcggt ctcaaaccga aaaccgcgac tcccgtgtct cgtcgtcccg 120  
tgctgcccgc tgacttctcg gcttggccgg gcgggacacg cccacggcat cgcgatggct 180  
gcgcgcggcc actgcacgcg cacacggcgg cgccccgcg ggcggtttcc ccaggcccag 240  
ggcatccacg aggagaggac aagcgcgcgg cgcggtcgag ctgttgaaac gccggccgag 300  
gttgattttc tcgtgcgatg gacacgacac ggtgttgacg acgacacggt gttgacgtgg 360  
ccggcgccgt tgacgcg 377

<210> 2602  
<211> 421  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-035-Q1-E1-H12  
<400> 2602

tcattggacg accctatagt gaatcgtatg actccgcgtc gtgtcccttc tcttcctcct 60  
cctcctcctc ctctctccaa caccatcc atcagcgtg ccctccgcat tgctcttgat 120  
cccatccagt acatcgattc tcccccaag atcaaaggcc ggaggaggaa gaaaggttag 180  
ggagtcggcc atgggatgct tttcatgctg ctgtgtggca gatgacgaca acgttggcag 240  
gaggaagaag catgacgatc cctatgttcc tatccctgct catgtttata attttggacc 300  
tagccggttc ccagcccaa cccctgtcat ctccactggc agagctcagc caattgcagt 360  
accggccatt catctggaag agctgaagga aattacaaa aacttcagca gtgatgcct 420

c

421

<210> 2603  
<211> 303  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-H3

<400> 2603

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caacattgca acgggtgaag tgctcaagga acatgcaatg cgtcgacgtg caggacaacg 120  
atctcagtcg tgctgcgagt gcacctggac atgctggcaa tgtgtgcagc gttatgacgt 180  
acgacgagct attgatctga catcgacagc atgtcggcaa gtcaagtga gaacacccca 240  
ggatcagtcg tggatggatc ggggaccgca ccctgtccag catacgacat gacgaccgcg 300  
gtc 303

<210> 2604  
<211> 81  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-H5

<400> 2604

atagtgagtc gtattaaaaa gtacgactca ctatagggag tcgtattaag ttgtacgact 60  
caatagtggg actcgtaaga g 81

<210> 2605  
<211> 71  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-H7

<400> 2605

acaacaccct aaagtgagtc gtattaaaaa aaaaaaaaaa aaaaaaaaaa ggaaaaaaaa 60  
caaaaagata a 71

<210> 2606

<211> 450  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-035-Q1-E1-H8  
  
 <400> 2606  
  
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 atcagcgggc atggcctcga ttccggcgac gaccttcgcc gtcattcttaa ccgtcctctt 120  
 ctgtgcccgc gctggcaccg ccgtcgacaa cgacctcccc gactacgtca tccagggccg 180  
 cgtctattgc gacacctgcc gcgccgggtt cgtgaccaat gtcaccgagt acatcgccgg 240  
 cgccaagggtg aggctggagt gcaagcactt cggcacccgg accgacggga acggcacgta 300  
 cacgatecag ctcaaggaca gccacgagga ggacatctgc cagggtgtct tggaggagag 360  
 cccgcgcaag gactgcgacc angtgcangc ggacagggac cgcgcccgcg tcctgctcac 420  
 caggaacgtc ggcacagcg acaacctgcg 450

<210> 2607  
 <211> 426  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-036-Q1-E1-A10  
  
 <400> 2607  
  
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 gcctccgccg agcatcgatc atgtcggcct actgcggcaa gtacgcggat gagctcatca 120  
 agaatgctgc ctacatcggc acccctggca agggatcctt tgctgctgat gagtcaactg 180  
 gcaccattgg caagcgcctt tccagcatca atgtcgagaa cgtggaggag aaccggcggg 240  
 ctctccgtga gtcctgttc tgctgccctg gtgccctcca gtacatcagc ggtgtgatcc 300  
 tcttcgagga gacctctac cagaagacca aggatggcaa gccttttgtc gatgtcctca 360  
 aggaggaag cgtcctccct ggcacaaagg tcgacaaggg caccattgag gtttttggca 420  
 ccgaca 426

<210> 2608  
 <211> 407

<212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-036-Q1-E1-A11  
  
 <400> 2608  
  
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 aggacggcng cggcaaaaag aagccccacg tcaaccacgg caagtttaag gcggagccgt 180  
 ggacgggacgg gcacgcgacg tactacggcg ggcgcgacgg gttaactgac accacggaca 240  
 gcggcgcgctg cggctacaag ggcgagctgg ggaaagacta cggcaccttg acggcgggccg 300  
 tggggcccgtc gctgtacacc aacggcacccg ggtgccgcgc gtgctacgag ctcaagggcc 360  
 ccaagggcac cgtggtggtg acggccacca acgaagcccc gccgcgcg 407

<210> 2609  
 <211> 222  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-036-Q1-E1-A12  
  
 <400> 2609  
  
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 tgttacttcg tcgctatacc ggtctcagca gctgctaata taactgtcat gctgggctagg 180  
 aacctgtggc ttcgatctca taatttttct gtcacttatg ag 222

<210> 2610  
 <211> 421  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-036-Q1-E1-A2  
  
 <400> 2610  
  
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 gtggaggagc cggctgcggc ggccgacgtt gagcatcaga aggctaataa ggtggtcgct 120



ccagaggcgg ccgtcgccga gcccgatcac aaggaggagg aagccgtgga gaagaccgtc 180  
gtcgaggagg agaagccagc ggcagccgcc aatgcagagg aaaaggtcgc caccgccgcc 240  
gagaccacga cgacggtgga ggcgaagaag aaggacgtcg aggaggccag gaaggagaag 300  
caggcgcagc aaagctgacc gactgtccgt gcatgcgcgt gccaaactaat ataattattg 360  
gctgatgata cctgatgatc agtgtgtgat cgagcaagga gacgacactt gaattctcta 420  
c 421

<210> 2611  
<211> 408  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-036-Q1-E1-A4

<400> 2611

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gtcgtggcag gcgtacgtgg acgagcacct gatgtgcgag atcgagggcc accacctcgc 180  
ggcggcgggc atcgtcggcc acgacggtgc cgcctgggcg cagagcacgg cgttccccga 240  
gttcaagacc gaggacatgg ccaacatcat gaaggacttc gacgagccag ggcacctcgc 300  
gccgacaggc ctgttcctcg gacctaccaa gtacatggtc atccaaggcg agcctggtgc 360  
cgtcatccgt ggcaagaagg gatcaggang catcacctg aagaagac 408

<210> 2612  
<211> 432  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-036-Q1-E1-A8

<400> 2612

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ttcttcacc tcaacatctt cgagtgaag aacgtgctga tcgacaaagt tacggtcaag 180

gcccccgggc acagcccca caccgacggc atccacatcg gcgactccag caacgtgacc 240  
 atcagcagca ccaccatcgg cgtcggcgac gactgcatct ccatcgggcc cgggagcaag 300  
 atgatccgca tccatggcgt caagtgcggc ccaggccacg gcatcagcgt cggcagcctg 360  
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 gggcacacga ac 432

<210> 2613  
 <211> 417  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B12

<400> 2613

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 ggagtaagca tgaaccgcat cctttctcac accgacattg atccatcgct caaatgacac 180  
 gcctttcttt catcatcata ttgaccacat tcgtcgtctc tgcgcgctg ttgtaaacyg 240  
 gttagtagaa gaacaaatcc cgtagctgga caaggggtga acacttactc tctccgtttc 300  
 gtttttagttg tcgctggaca gtgcaaaatt gacctatcca gctacaacta agaagaaacyg 360  
 gatggagtaa ttgttaggcg tacaaggcgc agactgcttc ccacttgctc gtggggc 417

<210> 2614  
 <211> 411  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B4

<400> 2614

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 cggcgtgcgg cggcactggg aatcagacaa tcctcatacc caaaggtgac ttccttgctc 180  
 gacaactcaa cttcacaggc ccttgcaaag gcgacgtgac catccaagtg gatggcaatc 240  
 tgctggcgac caccgaccta agccagtaca atgaacatgg taattggatc gagattctac 300

gcctggataa cctggtcatc accggcaagg gaaaccttga cgggcacggc ccagccgtgt 360  
 ggagcaagaa ctctgcacc aagaagtatg actgcaagat ccttccaac t 411

<210> 2615  
 <211> 397  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B5

<400> 2615

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 tggctaggac catgtcgacc agcttcaagg agccaccttg tgtcgccgaa cacctccctc 180  
 tctctggccc cgtgcagctc gcggcgctga cgggttctc ctgggccaag aagccccggc 240  
 ccgacgccac gacggccgcg gtaactgtga tgatgcgcga ccggctccat gtggccaggg 300  
 accatcaggt acaacatcag cggatgagga gacggagcat gaaccatctc cggctccggc 360  
 gccaccacca ccgccacatc agcggcggca tcatacg 397

<210> 2616  
 <211> 437  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B8

<400> 2616

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 tatattttga atattttctc atatgataaa ctaaaaataa atttgttcat aaaacctata 180  
 tctctctcat agtttatgta actacgagag atatgtataa aatttgtgca tattgttaga 240  
 actatcatgt gagatgaata aatgatcaaa caaccaaatt aaactttata gatcttgaaa 300  
 agttatagaa gtttgtagtt gacaactttt tcatttgaag tcatatgtgc aacgaaaact 360  
 atgcctgaat ttaaaaaatt taaaatttga attttgaaaa caacctcgaa agaaaaaacc 420  
 accaacatga aagttgt 437

<210> 2617  
 <211> 412  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C1

<400> 2617

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 ttctagatct gcgccatctc cgttgctacg accttgacct caagaagttt gatgaggact 180  
 tcaatatact aaactgggtg catgaacata agttgtccta tcctattcta tctatcttag 240  
 ctagagatgt tatttctgtt cctgtctcaa caatttcctc agaatctgca tttagccttt 300  
 gtggcaggat aattgaggaa cgacgacgct gcctagcacc agaaatggta gagatgttac 360  
 tttgcatgaa agattgggaa ctaagagaag caagagggca acactctaca ca 412

<210> 2618  
 <211> 439  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C11

<400> 2618

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 gttcaagat cccctcgtac ctgggccgcc cctggaagga gttctcgcgc ctcgatcatca 180  
 tggagagcac catgccgac ttcgtcaagc cagaggggta catgccctgg aacggcgact 240  
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 gcaagagggg caactggccc ggcttccacg tcatcggacg gaaggaggcc gagccgttca 360  
 ccgccggggc gttcatcgac ggcgccatgt ggctcaagta caccggcgcg ccgcacatac 420  
 ttggtttcaa gttctaaag 439

<210> 2619  
 <211> 441  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C2

<400> 2619

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cattgcaagc aataataatg gagacgacga cgaagctccg gtggagccgg cccggctcct 180  
tcctcctcgt cgccgcggcg ttcttggcgt ccgccgccgc gtcgggcgctc aacgtcggcc 240  
agttcgacga ccacttgcag aagcggaagg agctcgccga ggcgtcggcg agggaggcgt 300  
acaggcccga cccgtacaac gtcaccaaca gttcaacgc cgccgtccac agagctgtca 360  
gcagcagtcg gcgtgagatg cgggagaggc cgaggaagca caagaagaag ggcccgttcc 420  
ggggcgacga aacctatcga c 441

<210> 2620

<211> 206

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C3

<400> 2620

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ccgtggtcct cgccgccgag gcccggcgcc ccgccccag cagcacctcc tcggccgcgt 120  
tcccgggggt cagcgccttg ctgggcgcct cgggtgctctc cttcatcgcc gagtaggtgc 180  
agtagaatta aaggaggatc ggaagg 206

<210> 2621

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C5

<400> 2621

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ggcaccttcg ccaaggtgta ccacggccgg aacctcgcgt ccggcgagag cgtggccatc 120

aaggatcatcg acaaggagaa ggtgatgcgc gtcggcatga tgcaccagat caagcgcgag 180  
atctccgtca tgcgcctcgt ccgccacccc aacgtcgtgc agctgcacga ggtgatggcc 240  
agcaagagca agatatactt cgccatggag tacgtccggg gcggcgagct ctccgcccgc 300  
gtcgcgccgc gccgggtcaa ggaggacgcc gcgagaaggt acttccacca gctcgtcggc 360  
gccgtcgact tctgccacag ccggggcgtc taccaccgc 399

<210> 2622  
<211> 200  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C7

<400> 2622

ctcgcgggtc gacacacgcg tctacacaca cgttctggca agcgggtggt acggcgtggc 60  
catgagtcag ttagagagcg agcttgtgat ggggagagtt cttttgttgg acggagagtt 120  
caaaatccaa aaatcttggg gtatgtacag ttgtctatga ggaataactaa cacgtcttgc 180  
agtgttctg cctctcaaaa 200

<210> 2623  
<211> 453  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C8

<400> 2623

actcgcgggt cgaccacgc gtctaggatg cctcgcacga agtgtccgat cctgcctaac 60  
accaacttca cgtacaagtg gcagcccaag gaccagatcg gcagcttctt ctacttcccg 120  
tccatcggca tgcagcgggc ggcgggcggc tacggggcca tcagcgtggt cagccgcctc 180  
ctcatcccgg tcccgttcga ccagcccccg ccggagaacg accacgtggt gctcatcgga 240  
gactggtaca ccaaggacca cgaggtgcta gcccgccaga tcgacgccgg caagggcgtg 300  
ggccgccccg cgggcgtgct catcaacggc aagggcggca aggacctgga ggccgcgcct 360  
gccttcacct tcgaggccgg caagacgtac cgcctccgcg tctgcaacac cgggatcaag 420  
gcgtcgtca acttccgcat ccagggccac tac 453

<210> 2624  
 <211> 406  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-036-Q1-E1-D1

<400> 2624

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gccacgatcc ctccaaggcg gacaagggat tccacggagg agggtaacccg gccgccgggtg  120
gatactacgg cggccattac cccggcggcg gctaccctgc tccaccgggc ggcgggtgcgt  180
accctcccgg gcctgggtac ccggtaccac ctggtgggta cccgcctccg ggtggctacc  240
ctcagcctgg cggtataccg ccgtcgcaca gggcgtaacc ggcgcggggg gcaggcgcgt  300
atcctcccag cgggtacccc catcaaccgg tctaccaca gcctggctat ccatcgatgc  360
ccggtcattg tggcatgtac cgaagaggcc acggtgcang gggctc                        406
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<210> 2625  
 <211> 378  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D10

<400> 2625

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gtcgatgcac gcctctaaag tgagtcgtat tataagaaaa caaagcaaaa aaaaaaata   60
aaaaataaaa aaaatcaaaa aaaaacagag acaaacaaaa acagtttaac gcataacaaa  120
cacataaaac ggggcaagga aaaccacaaa cattgtaaac caaatctaca tcaaaaaagg  180
ggggggccctc ccaaagggtta tcgcgctaga tccccctgct tcacaactta agccctcttc  240
caaggtcccc ccaatttaca tttccggggg ctttttttaa acaccttgcc cgggaaaacc  300
ccgggctttt ccaaaattaa tgcctttaa aaaaaccccc ctttctccac ggggtatttt  360
acgaaaaggg gccccctc                        378
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<210> 2626  
 <211> 447  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D2

<400> 2626

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ggtgccacaa cctctcctgc tgctcgtgct ggtcgccgtg ctagcggtgg ccgccgatgt 120  
cgccaacgcc ggccacgcca agcccctaac gcctggcggg cgcgtggtac acgacaacca 180  
cggcaagttc acggccgggc cgtggaaacc cgcccacgca accttctacg gcgggcgtga 240  
cgggtccggc accacggcgg gcgcgtgcgg gtacaaggac acgcgcacgc aggggtacgg 300  
cgtgcagacg gtggccgtga gactgtgct gttcggtgac ggcgcggcct gcggagggtg 360  
ctacgaggtg cgggtcgtgg acagccctag cgggtgcaag cccgacgcgg cagcgtggt 420  
ggtgacggtg accgacctgt gcccggc 447

<210> 2627

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D5

<400> 2627

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cggcctcgag gccggcgacg acgcaggcgc gaggcgcggg aggggtccggc catgacgtcg 120  
tccgtgcggc agtgggtggc cgcgcgcccc gctgcgtca aggacaggag gagcctgctc 180  
ctggcgcgcc tgcccccg cggggccggg tcgtcgtcgt ggcaccaccg ggagctggag 240  
gcggccgtga tccgcgcgac gagccacgag gaccggtgga tggactaccg ggcgcgccg 300  
cgggtgttcg cgtgggcg ctcgtcgccc acgttcatcc ggcccgatcat gtgggcgctg 360  
gcgcgccg cgcggcgac gcggtgctgg gtcgtggcgc tcaagtcgct catgatcgcg 420  
ca 422

<210> 2628

<211> 462

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D6



<400> 2628

gtccagaact cccgggtcga cccacgcgtc cgcacacgcg tccgtccacc tcaacatctt 60  
cgagtgaag aacgtgctga tcgacaaagt tacggtcaag gccccggcg acagcccaa 120  
cacggacggc atccacatcg gcgactccag caacgtgacc atcagcagca ccaccatcg 180  
cgtcggcgac gactgcatct ccatcggccc cgggagcaag atgatccgca tccatggcgt 240  
caagtgcggc ccaggccacg gcatcagcgt cggcagcctg gggcgctaca aggacgagaa 300  
ggacgtggaa gacgtgcagg tgacgggggtg cacgatcgcc ggcaccacga acggcctgcg 360  
catcaagtcg tacgaggact ccaagtcgtc gtcgaaggcc agcaagttcc tgtacgaggg 420  
catcaccatg gacaatgtct cctaccccat catcatcgac ca 462

<210> 2629

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D8

<400> 2629

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ttgcactctt aagaagacga tggtcggcgt ccgcatcaag gcgtacgagg acgccgcctc 120  
cgtgtcacc gtctccaaga tccactacga gaatatcaag atggaggact cagccaaccc 180  
catcttcacg gacatgaagt actgccccaa caagttgtgt actgccaaacg gcgcctccaa 240  
ggtcaccgtc aaggacgtca ctttcaagaa catcacgggc acctcctcca ccccgagggc 300  
cgtagcctg ctctgcactg ccaaggtccc atgcaccggc gtcaccatgg atgacgtcaa 360  
cgtcgagtat agcggcacca acaacaagac catggctata tgcacgaacg ccaagggcag 420  
caccaagggt tgcctca 437

<210> 2630

<211> 411

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-036-Q1-E1-D9

<400> 2630

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caacctgtgc acaggacggc ggggaagcac gccacaagt acaagggtgt ggacgcggtg 120  
acggtgctag agatgcangt ggacgcgttc aagaagcgcg tgaaggcggc gcggaggctc 180  
gccaaggagg aggtcaagac ggccgcgacg cccgaagcgc ggagggcgct gaacctctgc 240  
aagacctact acctggacgc cgccgacaac ctcggcgcct gcaagcgcgc catcggttc 300  
cgcgacgccg tcaccatccg cgccacgatg agcatggtgg cgcaagacac gcagaactgc 360  
gacgaagagt tcaagaange cgtctccaag aaccccatgg aggaccacaa c 411

<210> 2631

<211> 261

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E1

<400> 2631

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catggctgcg cgcattccga tgcgtgggca tgttttttga ttcgacacac cttttgtcct 120  
ctttttcttt gttccctctt tctccttaat ttaacgaatt gatgcatgcc gctgatgttc 180  
ttcccctgag agagggatta acatttgtat catttcatcg cttgccattt gtttgaatcc 240  
attcaacaat tcattcaaaa a 261

<210> 2632

<211> 337

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E10

<400> 2632

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actaataaaa ctgcgagcgc cgccatccga gagaacaagc caaccgaccc cgtccccaag 120  
gcaatccgtc gccgacgtac caccgccacc gcaggagcga gatggagatg aagaggatcc 180  
tcttcgccgt cctcgtcgtc atcgccgcct cagacaccgc agtgctggcc tccaccgagg 240

ccgccgccgc cggcgcccca actgcctccg agtcgtccgc caaggctccc gctggcacgg 300  
gtccccggcg cgccgctggc gccgccaccg cagggcc 337

<210> 2633  
<211> 379  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E12

<400> 2633

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agccatgggt gcctgtgcaa cgaagcctaa gacgcttgag gggaaagccc cagctgaggg 120  
caccatctcc acacccaagg ttgcacctga gaccactacc atccacattg aggttgccggc 180  
aaaacatgca gtagttgaga aggtggagga ggacaaggag gaggcactaa cagtggcggc 240  
gaaacaagag ccagcagcca ccattgagcc tcagcagatt gctagtgagg tgaccacttc 300  
ggaagtggcg gtcgtcgttg tcgagcctga gaacaaagag gaggaggaag ttgtggagaa 360  
gaccgtcatc caaaaggag 379

<210> 2634  
<211> 447  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E4

<400> 2634

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gggctccgtc tgttccgtcc atccaccgcc ccggtcgtct cccggccaga tccctctcct 120  
gcaaggtttc tttgcgagtg gccggagaag atgatgggcg ggttcctctc cagggtcctc 180  
ctgctggctt ttggctatgc ctatcctgcc tatgaatgct acaagaccgt tgaactgaac 240  
aaaccacaga ttgagcagct catattttgg tgtcagtatt ggatttttagt tgccctgttg 300  
acagttttgg agagatttgg agattttaca atatcatggc taccgtttta ctcagaagca 360  
aaggtgttgt tctttgtata tttgtgttac cctaagacaa agggaactac gtatgtttat 420  
ggaactttct ttaagccata tatttct 447

<210> 2635  
 <211> 438  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-036-Q1-E1-E5  
  
 <400> 2635  
  
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 tggcggggcg gtggtacacc acaaccacgg caagttcacg gccggggcgt ggaaacccgc 180  
 ccacgcgacc ttctacggcg ggcgggacgg gtccggcacc acggcggggc cgctgcgggta 240  
 caaggacacg gcgcgcgagg ggtatggcgt gcagacggtg gccgtgagca cgggtgctgtt 300  
 cggcgacggc gcggcctgcg gcggggtgcta cgaggtgcgc tgcgtggaca gccccagcgg 360  
 gtgcaagccc agcgcggcgg cgctggtggt gacggcgacc gacctgtgcc cgcccaacga 420  
 acagcaatcc gcggacag 438

<210> 2636  
 <211> 444  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-036-Q1-E1-E8  
  
 <400> 2636  
  
 gggtcgaccc aagcgtccag ctagcgacgg ctggagcctg ggcactgctc atcgctctcg 60  
 cggctgccgt cgcggtcctg gccgcgcggc cggcgtctgc aggcggggga gccgcggcgg 120  
 tggcggagat ctgcatgaag actccgtccc ccgacctgtg caccaggacg gcggggaagc 180  
 acgccaacaa gtacaaggtg gtggacgcgg tgacggtgct agagatgcag gtggacgcgt 240  
 tcaagaagcg cgtgaaggcg gcgcggaggc tcgccaagga ggaggtcaag acggccgcga 300  
 cgcccgaggc gcggagggcg ctgaacctct gcaagacctt ctacctggac gccgccgaca 360  
 acctcggcgc ctgcaagcgc gccatcggct tccgcgacgc cgttcacatc cgcgccacga 420  
 tgagcatggt ggcgcaggac acgc 444

<210> 2637

<211> 425  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-036-Q1-E1-E9  
  
 <400> 2637

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acggcaaaac accttcgccg gcgagagcat ggcgatggcg taccgtgtcc tggaggtcac 120
cctggtgtcg gcaaatagacc tcaagaaagt gtcgctcttc tcccggaactc gcatctacgc 180
cgtggcttcc atctccggat tcgacctccg catcccttcc cacagcacc c aagcagacca 240
cagcaacggc tgcaacctcc gctggaacgc cgtggtacac ttcccatcc cggctgccgc 300
tgacaccgc ggctcgcac tccacgtgag gtcgcgcc cagcgtctat acctgngcga 360
tcgcgacatc ggcgaggtgt ttgtgccc cgcacacctc ctggccggcg ccgacaagg 420
tggcg 425
  
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<210> 2638  
 <211> 295  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-036-Q1-E1-F1  
  
 <400> 2638

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catggctgtg cgcattccga tgcattggca tgttttttga ttgcacacac cttttgtcct 120
ctttttcttt gttccctcat tctcctta ttaacgaatt gatgcatgcc gctgatgttc 180
ttcccctgag agagggatta acacttgat catttcatcg cttgccattt gtttgaatcc 240
attcaacaat tcagtcaaga aaaaagtaaa caaaaagggc ggccgctcta gagga 295
  
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<210> 2639  
 <211> 441  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-036-Q1-E1-F2  
  
 <400> 2639

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 cgatcgaacg agcacaggca cgcacgcacc atggcccgcg ctctcgccct cgcctccttc 120  
 ctctctgctcg cctccgccac cgtggctttc gccgcggagg ccccggcagc ctcgccgaag 180  
 cattcggcct ccacgccgtc aaaggcgccc agcagttcgc ccgacaagtc cgagaaggcc 240  
 cccacggcgt cggctgagaa tgctgcagag acgccgaagg caaccccggc caaggccccg 300  
 gcggcggcct ccaagtcaga ggcctgcct tccgaggcgc ccgactccgg gtccagcgct 360  
 gcgtcaccta ctagcgagag cgccgcgtca gagaaggccc ccgcccgtgc cccaaggac 420  
 tcgtcggcca gcccttcgc g 441

<210> 2640  
 <211> 411  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-036-Q1-E1-G1  
 <400> 2640

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 gtgatcaagc agtgggcaca ggtcgtgac gccttcagcg cctctgaagc ttacaacagc 180  
 aggttgaggc agacgcttga cgccaagcag ctcaagactg gaatgatgca caaggggaag 240  
 gtgaacaggg tggacttctc agggccgctg ctgtcgcagc cccggcgcat cgacgagctc 300  
 ctgcacatcc acgagcagca gatccggcaa gctggtcgcc ggccatggtt catgaaaggc 360  
 accgaggang aggagcactg atggcagaga cacggcatgg acacaactaa a 411

<210> 2641  
 <211> 403  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-036-Q1-E1-G3  
 <400> 2641

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tactgagcta gccttcagaa aaaaaagaaa agaaagagat tgagaagcag ggagaaaaaa 120  
 tggcactggc ccattgagga agcttgagaa ccagttaaca agaattgcc aacatattctt 180  
 ggacaatctt gttacacagag ttttaaggtt tcccagcaga gaagagcgcg tgcaaccacc 240  
 acattcatat aattaataag caagggttag agaagaggca acatgggcac aaagatgaag 300  
 aaggggatcc tgaagccgtt ccgctatata tcaaccatca tggatggtaa ggaggctgaa 360  
 atgcaaattg ggttcccgcac ggatgtaaaa cacgtggcac ata 403

<210> 2642  
 <211> 453  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-G4

<400> 2642  
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 ctcttcacg ctgacggcca aggctgctgc ggaggacgac gatgaccct tcgcggagct 180  
 gtacctggtg aagtggacgt cgctcttcac cccaccgttg gcagtgatcg gtatcaacat 240  
 cattgcgctc gtagtcggtg tgtcccgcgc cgtgtacgag gagatccgc agtacagcaa 300  
 gcttctgggc ggccgggttct tcagcttctg ggtgctggcg cactactacc cgttcgccaa 360  
 ggggctcatg ggtcgccgcg gacgcacgcc gaccctcgtc tacgtctggg cgggacttat 420  
 ctccatcacc gtctccctgc tttggatcac atc 453

<210> 2643  
 <211> 421  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-G5

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 ggcggcggag gcggaggcga aggcgaaggc tgtgggaggc gcgccgtcgg tgcccgtggt 180

ctcgctggac atcgcgcagc tgggcgccaa gggcgacggc aagtcggaca gcaccccgat 240  
 ggtgctcaag gcgtggaagc acgcgtgcga ggcgacgggg cagcagaaga tcgtcatccc 300  
 caagggcaac tacctgacgg gcgcgtgga cctggtgggc ccctgcaagt cctccatcat 360  
 catccgcctc gacggcaacc tgctcggcac cggcgacctc aacgcgtaca agaggaactg 420  
 g 421

<210> 2644  
 <211> 444  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-G6

<400> 2644

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 cgtcgcacgc tccctagggg tccgcagggc cggggatcgc cggagatgga ctggagcgcg 180  
 gtgacggcgg aggacttggg ggacgcgctg cgggaggtgg actggtccat gccgccgcgg 240  
 cctgtcccgg agttctttct ccgcttcacc gtcccacgct cctactccaa gtggaccagc 300  
 cgcctcaagt gcaacctcta ctactacagg acaaactatt tcattctgat catgttcac 360  
 cttgggatgg gcttcttttg gaagccagtt gctatagttg ctgcttttat gactggactt 420  
 agcatcgcat ttctcaatga tagt 444

<210> 2645  
 <211> 216  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-G7

<400> 2645

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 ctccttctcc atcttcttca tctccatata tagctagagt gagacttcgc tgttgtttaa 180  
 aagagaagag ttaagaaatg gattgacaag ttatat 216



<210> 2646  
 <211> 439  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-036-Q1-E1-G8  
  
 <400> 2646  
  
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 tagcgagttg cgcaccggga gccgtcggcg gtataccgct ctctgtgccg gatcaacaaa 180  
 gccacaggtc cgattatctc ctttcgtgac ttagccaacg ttgcgccgga tagatcagta 240  
 ctgctaatacg ctaacaacac atcaactcaa ctaagcctgt tgtacgcata gcaagaaaat 300  
 tgacggatct catcatagac agtgacagta ggatatgtgc tgactgtggg gcacctgata 360  
 ccaaatgggc atctggtaat attggagtgt ttctttgctt aaaatgtgga gatgttcata 420  
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<210> 2647  
 <211> 392  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-036-Q1-E1-H1  
  
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 tttctctccc ggacgtcgat cgtgttcttc agcacgggct agctagctcc ctccctccca 120  
 gccatggcga cgccggacaa caaggggcac gggcatccgc tgcccaagtt tggggagtg 180  
 gacgtgaaga atccggccac gtccgagggc ttcaccgtca tattccagaa ggcccgcgac 240  
 gacaagaaga ccaccaccgg ccctggggct gggaacgcgc gcgcaggcat tccgccggcc 300  
 ttcaggaacg gcggcgcgga cggcgggtac agggccgact tcggcgacgg caaccagtac 360  
 acgccgcca aacggaagaa gtgggccttc tg 392

<210> 2648  
 <211> 391  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-H10

<400> 2648

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ttctttcttc ctctctctcg tctctctgaa ttccgtctct tgtctctgtc ggcctcgtc 120

ggcttccccg gttcttgaga ggggaaatag gaggcggagc cgaggagagg gatggggagg 180

gacgagaggt tcccagtgtg ggaggccgcg ctccggcgtg gggtcgccgc cgccttcgcc 240

gctgggctcg tcggcgtgta cctttccatg ccggactccg actacagctt cctcaagctg 300

ccacgtaatc tccaggaact ccaaactctc actggccatc gtgagaacta tactagcgac 360

tacaccctac aggtgtttgt atgctactgc g 391

<210> 2649

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-H5

<400> 2649

gtccagaatt cgccgggtcga cccacgcgtc cactagtagc caaaggcaag ggacgtaaga 60

agtcgtctaa ttcttgatc gaattagacg acttcttcgt cctctcttc attagcacgc 120

taacttgtaa tctgcaggat ctaagcaaag acttgattta gttatggacg gattggtagg 180

cctcttgaaa gttcgcgtgg tccgggtat caaccttgcc taccgcgacg caagaggcag 240

cgatccgtat gtcgtcctac ggcttgcaa gaagaaactg aagacaagcg tgaagaagag 300

atccgtgaac cccatatggc aagaggagct aactctgacc gtcacagatc ccagccaacc 360

actgaagctg gtgagtgagc 380

<210> 2650

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-H6

<400> 2650

ccacgcgtcc acaacaagca ggttctcggc gcgctgccgt tgccgctgcc gtacaccatc 60  
acagccttcc agctcgcggt cggtccctg ctcattctcc tcatgtgggc caccaggctc 120  
caccggcgcc ccaggctctc cgctgcgcag ctgggcaaga tcgcgcgct ggccgtgggg 180  
cacatgctgg gcacggtggt caccaacatg agcctgggca aggtcgcgct ctccttcacg 240  
cacaccatca aggcctccga gcccttcttc accgtcgtcc tctccgccct cttcctcggc 300  
gaggttccct ccttccggg gctgggctcg ctcgtgccga tcgttgggcg cgtcgccttg 360  
gcgtcattca ccgaagtttc tttcaactgg accgggtttt ggagcgccat ggcgccaat 420  
cctgacaacc aat 433

<210> 2651  
<211> 310  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-G1

<400> 2651

cggtcagaa taccggggtc gaccacgcg tccgctagt taacgggtta ggcttccgag 60  
tagcacctca aggtcctagg ttcgatcccc tcgggggcga atttctggct tgggttaaaaa 120  
aaattcctcg ttgtgtcctg tccggcatcc gctccgggt tacgtcctgc gtgcaccctt 180  
cgggtgggct gtttgagagt tagcggttac ggccagggtt cggggatttt ctcgaccggg 240  
atcatgtttc ggtctcttct taatataata tcgagagggc ggtctttccc tcccctgtcg 300  
agttttctgt 310

<210> 2652  
<211> 221  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-G11

<400> 2652

cgcggtcca cccacgcgtc cgaacctgc ctctccatt gaccaacaat taagcctccc 60  
cgaccgccac atctattagg tgcagccatg ggtgcctgtg caacgaagcc taagacgctt 120  
gaggggaaag cccagctga ggccaccatc tccacacca aggttgcacc tgagaccact 180

accatccaca ttgagggttgc ggcaaaacat gcagtagttg g 221

<210> 2653  
<211> 415  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-G2

<400> 2653

gggtcgaccc acgcgtccgc ggtggtccac catggcgag cgagcgggtgg ccacgatgac 60  
gactaataag cccctcctcc tctcgcctt ggcgtccgcg ctccttggtg cggcgccggc 120  
cgccgcgaac gcgcccggcg gggcggttcag caactgggtg gcgatgaacc agcagagcta 180  
cgcgctgtac gcgcagaagt ccgtcgggga cgggggcaag gagcccctgg acaagaagct 240  
gtcggaggcg gagaagaaga acgtcacgta cgtggtggac cccatcggca agggcgacta 300  
caccatcatc accgcgggcg tgcaggatct cgcggtgagc aacaccaatc gcgtgatact 360  
ggatctcaag cccggagctc acttgcgcca gaaactgatc ctgaagatca agaca 415

<210> 2654  
<211> 345  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-042-Q1-E1-G3

<400> 2654

ccgggtcgac ccacgcgtcc agcgctcac gggatgcatg cagatcttcg tgaagaccct 60  
gaccggcaag actatcacc tgcagggtgga gtctcagac accatcgaca acgtcaaagg 120  
caagattcag gacaaggang gcaatcccc aagaccagca gcgggtcaat ccttgccgga 180  
aaacaacttg aagaacggcg caagccttcc gactacaaca tccaaaagga gaacaacctc 240  
cacttggtgc tgcgcctcaa gggaagcatg cagatcttcg ctaagaccct gaccggcaaa 300  
actatcacc tccaagtgga gtcttcaaac accatcgaca atgtc 345

<210> 2655  
<211> 423  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-042-Q1-E1-G5

<400> 2655

ccacgcgtcc gccacgcgt cgggacactt ctaaggacat caccgtgaag gatgtgaaca 60  
tcacggcgcc cgcggacgtc gagaacacgg acggcgcca tgctggcggg tcctccaatg 120  
tacgcatcac caactcgacc attggcaccg gcgacgactg cgtctccatc ggccccggga 180  
gcgacggtgt catggtgaac aacatcacct gtggccccgg gcagggcatc agtgtgggct 240  
gcctaggccg ctacaaggat gagaaggacg tgagcgacgt gacggtgcgg gattgctgctc 300  
ttaggaacac caccaacggc gtgcgcatca agtcgtacga ggatgccgag tctgtgctca 360  
cggcgctnca tctcaccttc gagaacatca ggatgganga ggtggccaan cccatcatca 420  
tcg 423

<210> 2656  
<211> 284  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-G8

<400> 2656

cccgggtcga cacacgcgtc cgctcggacg acgacgacga tcagtaatag cacatcgacg 60  
acgacgatcg atatgtaata gcacgtcgtc gacgaccgac cgcagtcgtc gcagactggc 120  
tggcactaaa ccacaaatcc tcttcacctg gattacaaat atgtaactga gaaaggaaag 180  
gaaaacaaaa atgtaactgc gtgacaatag caagaatcca gcactcagaa tttggtacag 240  
ccacgcagtt acaaattctg agtgctggat tcttgcatt gtca 284

<210> 2657  
<211> 219  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-G9

<400> 2657

ttcgcgggtc gaccacgcg tccgccacg cgtccgcgga cgcgtggcaa ggtcctagtc 60

atccttgtgt tcctcgccgt ggctcaccg gctgctctgg ccgccttcga tgtgatagag 120  
atgctggccg acaagccac gtactccacg ttctgaagc tcctgcagga caccaaggctc 180  
gcgggcgagg cgaatcagct ccggtcggcg acgctactg 219

<210> 2658  
<211> 206  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H11

<400> 2658

ccacgcgtcc ggcgaaaggc aaggacgta agaagtcgtc taattcttgg atcgaattag 60  
acgacctctt cgtccctctc ttcattaaca ggctaacttg taatcagcag gatctaagca 120  
tagacttgat ttagttatgg acggattgga aggcctcttg aaagttcgcg tggtcggggg 180  
tatcaacctt gcctatcgcg acgcaa 206

<210> 2659  
<211> 109  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H2

<400> 2659

cctatagtga gtcgtattaa gtggctatcg tagaggttga tgcgtgaggg aggacgcgcc 60  
atggaagtcg gtatgcgagc acggagtgga ggtggtaccc atgggggtgg 109

<210> 2660  
<211> 419  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H3

<400> 2660

gggtcgaccc acgcctccag cgctactcga cgaactgaac gagggggtga agccagggca 60  
gagcatgatg ttcagctccg gatcgagta cgactccggg gccaaactacg cggccaacat 120  
cagcaagttc aggaaggtgg ccttcgagag cagcgagttc agcaacgact acagcgggac 180

aagcgagtagc ggccgcccact ccgccccacgc ggccgacccag cggcagcaac atcgctgacc 240  
 tccctcgtagc agatgcgtgt gtgggtgtaca atattttatac caaggggtcg atgtcgactg 300  
 tcggatacta tcagagatac ccaaccctcg atcgtagacag ctttagtaca tgtaatgatg 360  
 ctcataaaat gtcagtgaac gtacgtatatt gtgtgtgaca tgttgctgct tgcttgact 419

<210> 2661

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H5

<400> 2661

ccacgcgtcc ggccgtgtat gcatggattg acaaagatgt tggttactgc caaggaatga 60  
 gtgatttgtg ctcaccaatg atagttctac taaacgatga agcagatgca ttttggtgct 120  
 ttgagaaatt gatgcgtaga ttgcgaggaa atttcagatg cacagatcaa tctgtgggag 180  
 ttgccaaacca acttcaacac cttgcgtcta ttattcaggt tcttgacccg aagctacatg 240  
 accacctaga aactcttggg ggaggtgact acctttttgc gttccgtatg ttcattggtgc 300  
 tttttaggcg tgaagtatca tttggagact cttataacct ctgggagatg atgtgggctc 360  
 tggaatacga ccctgacatt ttcttcgcag cgtgtgaaga acaagggtgca gtaaatt 416

<210> 2662

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H6

<400> 2662

cccgggcccga cccacgcgtc caccacgcg tccggttcat atctcccctg gatcgctgcc 60  
 caagggcctc cactctcttg atctgtccag gaacaagatt gccagcgtcg agggcctccg 120  
 ggagctcaca aagctacgcg tgctcaacct cagctacaac aggatttcgc ggattgggca 180  
 tgggtctgtcg aactgcacgg ccatccggga gctgtacctg gcgggcaaca agatcagcga 240  
 cgtggaggggt ctgcaccggc tgctgaagct ggcgggtgctg gacctgagct tcaacaagat 300  
 tacgacggcc aaggcgtggt ggcagctggt ggccaactac cactccctcc tggcgctcaa 360

cctcgttggc aaccccggtgc aggcccaacat cggcgacgac gccctgcgcc gggcggtcac 420  
 gggcctcctc ccg 433

<210> 2663  
 <211> 414  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H7

<400> 2663

ttcacggtcg acccacgcgt ccaacgaagc cccccacaca caaaaaagca aaagcatcat 60  
 cacaataatg gcccgcgcggt gcgtgttctt cgtggtgctc ctcttgcccg ccgtcgcggt 120  
 ggcgcgcgttt gcggggggtg cgcgcgtgga tgtcgtggag ggcaggtcca tggcgctccg 180  
 cgacgcgcct gaggcggcgg ctgacgcgcc cgctcccggt cccgactccg cctcatcccc 240  
 ggactcgtcg tcggaggcgc cctccagcag cagctcatcc gactagccgc gcacaacgca 300  
 gttcttgtca tgatctatct agcaaataaa aagatcatat gtctcgtttg attctctgga 360  
 ataactaata gtatatatgc tgcgcccggg tgatatataa atatgtgcat gaaa 414

<210> 2664  
 <211> 403  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-043-Q1-E1-A1

<400> 2664

gggtcgaccc acgcgtccgc tgctgttctt cgaaccgtcc cgttcgttcg attcgttctt 60  
 tccgccatgg aggctcggag gaagcccgcg gtgtgctgtg cccttcttgt gctgctcatc 120  
 gtcgcctcca gcgcaacggt gtcgactgct catgacgaga gctgctggaa ggacgacgac 180  
 caccacccta tctgctttcc cgaagactgc gtggcgacct gccaggatca cggccacgcg 240  
 gacggccgct gcaactgggc atggtcgtgg aggccgtatt gccagtgcct gttggcggac 300  
 tgccaatagg cgcgaacagc tgcgtcgcat ggcgtcctgg ctgcctcgcc ggccgatgaa 360  
 ggatgaacgg ttgcngccga tgatcgatgt gtccgtcggc atg 403



<210> 2665  
 <211> 396  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-043-Q1-E1-A10

<400> 2665

cgggtcgagc cacgcgtccg acgtcaacct cgccgtcgcc gtcgccgccg cgccattagc 60  
 agcctacgct gccgccacgc gccatcaagc catcgcccgt gctcaagtcc agcgtgtgag 120  
 actagtagaa cgctgcgatg gcagcgtagg gaatcacggg tcaattccac aacgtcaatc 180  
 gccaccggga gganagccan gaccgcccac gcgctccgcy tgcagccgca ctagctgctg 240  
 tcatcgcacg actacgtatc gctcgcgatg cgcgcggcta cacgtcaacg ggaaaggcaa 300  
 gaggtccttc atgtccagca tctacatgtg cctgttccca aaggatcatg actgagtgat 360  
 ccgaagatgg atattcaciaa tcgtcaccc gtatac 396

<210> 2666  
 <211> 413  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-A11

<400> 2666

cccgggtcga cgcacgcgtc cgcggacgcg tgggctactg cggccaacaa ggccttgcaa 60  
 gagcggccgt ccggtccgac aggggtccacc accaccaccg ccggtccgag gcgtcgtgtc 120  
 cggcaacctc cgcggccgtg gcggcgccga gggccgatga cgccctgcgc cagcgcccg 180  
 gggggctcgt gcaggtccgg gagcgggacc agggcccgt gtcgacgggg caccagcacc 240  
 tgcaccacca tcaccaccag ctgcggcggt cggcggcgtt cccaccccg cggccggggc 300  
 cggggcgccg ccctctcag cgctgcgaaa gcgacctcaa catcaggag caccgtcct 360  
 gcagcgaggt ggccggcggc accgcggcg gctgcgccgc tgtgtgctgc tgc 413

<210> 2667  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-043-Q1-E1-A12

<400> 2667

cgggtcgacc cacgcgtccg aattcaagta acacagttga gcacgacgat gggatccctc 60  
gctaataaca tcatggctgt gggcgccgtc cttgcagcac ttgtcgccg cgggtcgtgc 120  
tggtcccccga acgtgccgcc cggccccaac atcaccacca actacaacgg caaatggctc 180  
accgccagcg ccacctggta cggtcagccc aacagtgccg gcgctcctga caacagcggc 240  
gcgtgcggga tcaagaacgt gaacctgcc aacctacagcg gcatgacggc gtgcggcaac 300  
gtccccatct tcaacgacgg caagggctgt ggctcatgct acgatgtgag atgcaaggaa 360  
aaacctgaat gtcggggcaa tccagtcacn gtgtcatca cagacatgaa ctacgagcct 420  
atcgct 426

<210> 2668  
<211> 290  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-A5

<400> 2668

ccgggtcgac ccaaacgtcc aacgccgcgc cgcgggtgtt cgcgcacgcc gcctccgtgg 60  
ccatggcggt cctgtggctc gagttctcgc agtcgttcca ggtgctggca atcctcgct 120  
ccaagctcaa gcacgccgtc gcgctcggt acaagttctg ggtcggcgcg gggctccccg 180  
ccaagggagc cgcccacgtc gcgctcgct gccagctggg cctcctccgg tgcaaactcg 240  
cctgccaagt cggggtcctg ttgatgcaac ttggggccgt ccggggggggg 290

<210> 2669  
<211> 329  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-A7

<400> 2669

gggtcgaccc acgcgtccgc ggacgcgtgg gcggacgcgt gggcgcccc aatggggcta 60  
tcgttaccat ttcaacatac acgaccattt tctacacaca actttgagtg aagattttatc 120

ggacacaggt ggtaatcgtc tgacatgtcc tgagatacac ggagactgat ggtgccaggc 180  
tagtgggttg agtacaggat gagcgcaacc ggtagtgtgt atatcacgtt ctttgtactc 240  
aagaattttg tacagacaga atgcggtgcg gatagcatgc cttgcataca taataatttc 300  
aatacagggt gaaaacttga aatcaaaac 329

<210> 2670  
<211> 429  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-A8

<400> 2670

ccacgcgtcc gagacaagat ggcattgcaca aacaatgcga tgagagcctt gttcctcctg 60  
gtcctcttct gcatcgtgca tgggtgagaag gaagagtcaa agggcatcga tgcgaaagcg 120  
tccgggcctg gtgggtcctt cgacatcacc aagttgggcy cctccggcaa tggcaagaca 180  
tacagcacga aggtctgtgca cgaggcatgg gcatcggcgt gcggcggcac tgggaagcat 240  
acaatcctca taccgaaggc cgacttcctt gtcggacaac tcaacttcac atgcccttgc 300  
aatggcgacg tgaccatcca ggtggatggc aatctgctgg cgaccacgga cctaagccag 360  
tacaaggacc atggtaattg gatcgagatt ctacgcgtgg ataacctggt catcaccggc 420  
aagggaac 429

<210> 2671  
<211> 310  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B10

<400> 2671

gggtcgacgc acgcgtccgc acacgacgtc cgatgatacc tgatgatcag tgtgtgatcg 60  
agcaaggaga cgacacttga attctctaca gttggcatag cggcataggt cgggagagac 120  
actctcgact ggccacacca tgtaacaaac taaccttctt cgatgtctcc cattattttc 180  
ctccacggag ttcttctgat gaaacaacat gttctaattg ggaaaaaaaa aaaaaaaaaa 240  
aaaaagaaag aaacacaaaa agaacaacaa cttaaagtga agtaaatgaa aagggataaa 300

atcttacgat

310

<210> 2672  
<211> 326  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B11

<400> 2672

cgggtcgacg cacgcgtccg aaaacaacca cgcctccatc acatcactgc cgccgcggtc 60  
gctacagtcg ctgataagcc gctgcatcca cggatggaga tgaacaggat cccccacaca 120  
gtctctctct gctctgcac attcacttac acctctgcgc tagcgcaatc tctgaccaga 180  
tgatcgctcg ccgtettaca cgccatcgcc ggggaaaacg ttggcgttat cctcgcggaag 240  
cacattcact taaccccccg attaagaacc ggagccagaa ggaagaaagc cagggtccggt 300  
gacacatctc actactctgc gctgct 326

<210> 2673  
<211> 373  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B12

<400> 2673

gggtcgacgc acgcgtccga acacgcgtcc ggagcaagaa ctctgcacc aagaagtacg 60  
actgcaagat ccttcccaac tcgctgggtga tggacttcgt gaacaacggg gaggtgtccg 120  
gggtcacgct gctcaactcc aagttcttcc acatgaacat gtaccggtgc aaggacatgc 180  
tgatcaagga cgtgaccgtg acggcgcccc gggacagccc caacacggat ggcatccaca 240  
tgggcgactc atccgggatc acgatcacca acaccgtcat tggcgtcggt gacgactgca 300  
tctccatcgg ccccgggacc tccaagggtga acatcaccgg cgtgacctgc ggccttgccc 360  
acggcatcag cat 373

<210> 2674  
<211> 404  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B2

<400> 2674

ttctcgggtc caccgacgcg tccgaccacg catccgcgag gaacggggcct cagtgtctcg 60  
cgccagcaac aaggtctccg atgaagcggc ggcggctacc gcggtgccgc ctgcaggtgc 120  
cagtgccaaag acctcgagca gcaacgatgc ccgcgacggc gccatgggca gcgtgcagga 180  
cgagccgcgg gagcagcgcc acgatgacta tcaccccgag atcgtccccg agaagatcat 240  
acacgatgac gcgttgccgg tcgttgctgc acagaaggag accgccgcgg ccgccgacgt 300  
ctcgaatgag gacgacgtgg agtcgccccaa gaaaagagcg gctctgtcgc cgggtgccgga 360  
gactatcgtc atcgtcaccg acgcaacctc gaacgaggaa gacg 404

<210> 2675

<211> 387

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-043-Q1-E1-B3

<400> 2675

ggtcgaccca cgcgtccgat cgctggccca taaatatata tctatctatc gccatcgagc 60  
aattataatc tcacagaata ataaacatca tggggcaagc ctcacggctc gtcctcctcg 120  
ccgtcgtggc gctgctgtcc gccggcctcc tcccgcaggc gctgggtaag ggtaggggag 180  
gcaggggaca cgggtggcgcc gtcaacccgc aggtcgccgg catctgctct cgcaccccg 240  
tcccggaggt gtgcacgtcc accgccgggc ggcacgcgtc caagtaccg gtcacgaca 300  
acctggccgt gctgaacatg caggtggacg cgttcgccaa gcgcaacgcg caggcgcgca 360  
agcacgtcgc gaggtcnggc ccgcaca 387

<210> 2676

<211> 412

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-043-Q1-E1-B4

<400> 2676

attcacgggt cgacccacgc gtccgaccac gcgtccggcg acagcccccac cacggacggc 60  
atccacatcg gcgactccag caacgtgacc atcagcagca ccaccatcgg cgtcggcgac 120  
gactgcatct ccatcggccc cgggagcaag atgatccgca tccatggcgt caagtgcggc 180  
ccaggccacg gcatcagcgt cggcagcctg gggcgctaca aggacgagaa ggacgtggaa 240  
gacgtgcagg tgacgggggtg cacgatcgcc ggcaccacga acggcctgcg catcaagtcg 300  
tacgaggact ccaagtcgtc gctcaaggcc agcaagttcc tgtacgangg catcaccatg 360  
gacaatgtct cctaccccat catcatcgac cagaagtact gcccacaaca ca 412

<210> 2677  
<211> 298  
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<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B5

<400> 2677

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ttaataggcc tacaatgtag ccccttatat ccaacttcacg ggaggacctt ttcaaccatc 240  
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<210> 2678  
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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B6

<400> 2678

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cggcgacctg gccatgtcgc tcaccgtgct cctcgcgcca ctgccgatgg ccaggttcgc 180  
gcacatcgta gagcgggagg ccacctcggg ctcgggggttc gacatccgct tccaccgcct 240  
ccctgacgtg gagctccccg ccttctccgg cccggaggac atgatctcca gtttcatcca 300

gctgcaggcg tccaacacca aggcggccat tgccggcctg gcaagccccg tcgccgcgct 360  
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 gtacgtgta 429

<210> 2679  
 <211> 395  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-043-Q1-E1-B7  
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 ttgcgaagag ttgtgactcg ctaaggaaaa tggttttgcc ccgagtccaa attgttaggt 180  
 catcatgagg tcttctcatg cagcagacta acgaggggtgc ttccactgag tgcccacaat 240  
 cccatctatc tgaagatgga tgccgttgca ggaaataccc atgctcttcg cttctgatcg 300  
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 cagactactg aagcagatgg gactctaaaa gaaag 395

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 <223> Clone ID: LIB148-043-Q1-E1-B8  
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 tcatgcacat cttcagcttc ctgagcccaa tcccagatgg cgcttccttg catgccaccc 180  
 tcggctatgg ctgcgtgttg agaggccaat cagagatgag atggagcctg gagtttatcc 240  
 tgatctcgag gctgctgttt ctgctgctag gccgggtgac accattctta ttgcggtggt 300  
 tggttcccat gttgcatgta acatccaaat aaagaagcct atttgcataa ttggcggggg 360  
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tctatcaaca tgcaagattg caaatctga

449

<210> 2681  
<211> 360  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C1

<400> 2681

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ctaccggacg acaccaacca tgatacggag gacgacggtg tgcctaggcc tgctgcttct 180  
actactggcg gcgtcgactg cgacggcaca tttctcgatc ggcgacgtgg acgagtactt 240  
gaacaggcgc acgcaggagt cccgccacag gaaccacggc ggcgcgaga tcaatgacct 300  
catctccagt gctgcgcgt tccacgcaa cgtggatgca cgcgcgtatg gtcgccgctc 360

<210> 2682  
<211> 432  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C10

<400> 2682

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cgagatcctg tcggcaccgg cctccgcgcg ctcccgtgc cgcacgggac caacctgttc 180  
gcctgttcat ccaactcagc acattcacgc ccgcatctcg ccgtgggcag caccgcactc 240  
accaccgccg tcgcagttag gtcacgagtc agctgaagag caagttggta cctggaatct 300  
caagtcccag gtcaagaaca ggtaccgcag gatgaggcgc atggaggatg ctgtggcgag 360  
ttcgtgagag gtctaggcca tcgtctccca gtcaactttg gggtgctgga ccgtgtgtctc 420  
cttataatga aa 432

<210> 2683  
<211> 398



<212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
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gggttgccaa cggctcgttt cctcgtcttc aggggtgtcg cgctctccat cacggcggtc 180
ccggtgctgg cacgcattct cgccgagctc aagctgctca ccaccgacct cgggcgcatg 240
gccatgtcag ctgccgccgt gaacgacgtc gttgcgtgga tacttctggc cctggccatc 300
gctttgtcag gcaccgggtc ccctcctgtc cccttatggg gtgctgctan cgggaactgg 360
ctttgtcttc ccggcggttc tgttgctccg cccggggc 398
  
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<210> 2684  
 <211> 422  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-043-Q1-E1-C12  
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atcaccagca cctcctcaac cccggaggcc gttaccctgc tctgcactgc caagggtcca 180
tgcaccggct tcaccatgga tgacgtcaac gtcgagtata ggggcactaa caacaagacc 240
atggctatat gcacgaacgc caacggcagc accaacgggt gcctcaagga gcttgcattg 300
ttctagaccc tccatctact gacctctc tctaattata atttttctct cgtccttgca 360
ttgcccatta gatgctatcc attggtaacg cacaacagta aaacgacaca catccgtcag 420
ct 422
  
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<210> 2685  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C2

<400> 2685

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gaaagtccgc gtgggccggg gtatcaacct tgcctaccgc gacgcaagag gcagcgatcc 180  
gtatgtcgtc ctacggcttg gcaagaagaa actgaagaca agcgtgaaga agagatccgt 240  
gaaccccata tggcaagagg agctaactct gaacgtcaca gattccagcc aaccactgaa 300  
gctggaagtg ttcgacaagg acaccttcaa caaagacgac cccatgggag acgcgagggt 360  
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<210> 2686

<211> 355

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C3

<400> 2686

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gcggtcactg tgggaacttg ctgaagtga gtagagccg ctgtggatca aaggcggaaa 120  
ccactgcaac ctagaactgt acccggaata catcaaact ctgaagaagt tcgttggagc 180  
catagagaaa tcgccacccc cacctccgat cgacgagtgc atggagagct caagcccgtc 240  
ggattgtacc ccagcagaac ccgagtgtac agcggactca aggaagagca cggactgcag 300  
ggacaaagca aggccaaagca tagatcagag acaaagcacg gaccggcggg acaag 355

<210> 2687

<211> 170

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C5

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accaggcca gatcattcat ctaaaggggt tctttgtgc catagaaaat 170

<210> 2688  
<211> 426  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C6

<400> 2688

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caaacaacaa cgcaatcaga tatataactc ttagtgacaa aggtgctgag gtgaagacac 180  
tagagttgat cggagtacaa cgcctacac caaaaccgaa ggtgttgaaa cgcctaagac 240  
ggcagttatc ggcagatata gatgttatta atgtcgatgg tggttcttca aaggaaggat 300  
tcttTctctt tgcagttaca gtacctgatg gttaccattt ctccaaggTc atcaataacc 360  
ataagacatt gttttttctt atcttacttg caagtttgca ttattcatgg tagtcactaa 420  
tgactg 426

<210> 2689  
<211> 443  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C7

<400> 2689

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gccgtccgac ccggccaaag cggcgctgct caagaccttc caggacgccg gtgtgacgct 180  
cctcaagggc gacctgtacg accaggctag cctggTgagc gcggTgaagg gcgcggacgt 240  
ggTcatctcc gtgctcggaT cgatgcagat cgccgaccag agccggctcg Tcgacgccat 300  
caaggaggcc ggcaacgtca agaggttctt cccgtcggaT ttcggcctgg acgtggaccg 360  
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caccgaggcc gcgggcatac cct 443

<210> 2690  
 <211> 286  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-043-Q1-E1-C8  
  
 <400> 2690  
  
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 tatgtgagtc atgaaatgtt gcatcatgct gaggctaaat tattcttttg tttgatgcac 240  
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<210> 2691  
 <211> 228  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-043-Q1-E1-C9  
  
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 aaccttgccc ctattgggcg tgctctgctg caacatggca accaccggtt ccgccaacaa 180  
 gaaaggaatc aaggtcttcg gaagcttcga gggttcagaa tacggaag 228

<210> 2692  
 <211> 367  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-043-Q1-E1-D1  
  
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cctccatcca ggagatgttc cgccgctga gcgagcagtt cacggctatg ttccggcgca 240  
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 agagcaacat gaacgacctc gtcgccgagt accagcagta ccaagacgcc acagccgagg 360  
 agtacga 367

<210> 2693  
 <211> 398  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-043-Q1-E1-D11  
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 gcgaaggagc tcgcctgcgt ctgaacctac ttgcatccat cactcactct tcgtcacctc 300  
 tctctttctc actctcgcca gtcttttttt aggctcttgg caatctgcca actttcttat 360  
 tcattctact agtgtggatc tataattcca ttcaaaat 398

<210> 2694  
 <211> 416  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-043-Q1-E1-D2  
 <400> 2694

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 cgacacctgc cgcgccgggt tcgtgaccaa tgtcaccgag tacatcgcgg gcgccaaggt 300  
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cgacgggaac ggcacgtaca cgatcgagct caaggacagc acgangagga catctg 416

<210> 2695

<211> 366

<212> DNA

<213> Zea mays

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<400> 2695

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ctggaggaac ggcaagtctg cgcaggacat gatcctccgg ctcaggaacg tggagagcgg 180

ggagattcag ctgcagctgc agtggctcag catccctcct gctgcagcca gcaggtgaag 240

gaaacgaagc aatcgcatctt tcaacctctt tgtgaatgtc ggattgtaac aacttaaacc 300

agcaattaat ggggtcaggg tcagtcaggg tagttcatgt gttgccctat taatggtaca 360

ttgggg 366

<210> 2696

<211> 381

<212> DNA

<213> Zea mays

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<400> 2696

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tggtgagggg catcaacctt gcctaccgag acgcaagagg cagcgatccg tatgtcgtcc 180

tacgacttgg caagaagaaa ctttaagacga gcgtgaagaa gagatctgtg aaccccatct 240

ggcacgagga gctaactctg accgtcacag atcccagcct agctctgaag ctggaggtgt 300

tcgacaagga cacgttcagc agggacgacc cgatggggga cgcggagatc gacgtggcgc 360

cgctggtgga ggcggcgaac g 381

<210> 2697

<211> 420

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-043-Q1-E1-D5  
  
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 aggacggcaa gggctgcggc tcatgctacg aggtgagatg caaggaaaaa cctgagtgcg 360  
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<210> 2698  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-043-Q1-E1-D6  
  
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 cgagcagctc ttcaaggaga cggggagctt ctccaagaac ttcacgccag gtggcaagtc 300  
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<210> 2699  
 <211> 419  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-043-Q1-E1-D7  
  
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 ggactaaca gtggcggcga aacaagagcc agcagccacc attgagcctc agcagattgc 240  
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 ggaggaagtt gtggagaaga ccgtcatcga gaaggagaag ccatcagcag tccatgcaga 360  
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<210> 2700  
 <211> 441  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-D8

<400> 2700

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 gaccgtgggc gacaccgtgc aggacgcgtg cagcaagaca caattcccca agatctgcgt 180  
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 caacaacgcc aaggacagca ccgtgttcaa gtgctacgac agctgctcgg acgacgtcga 360  
 ggaggccgtc gccacactca acggcctcgt ccgggatcca ccgacgcca gttcctggag 420  
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<210> 2701  
 <211> 367  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-D9

<400> 2701

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ggcgtggca gagatctgca tgaagactcc gtcccccgac ctgtgcacca ggacggcggg 180  
gaagcacgcc aacaggtaca acgtggtgga cacggtgacg gtgctagaga tgcattgtgga 240  
cgcgttcaag aagcgcgtga acgcggcact gaggtcacc atagaggagg tcaagacggt 300  
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cgacaac 367

<210> 2702  
<211> 416  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E1

<400> 2702

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cggactcgca tctacgcgtt ggcttccatc tccgattcgc acctcgcgat cccttccacc 240  
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cccatcccgg ctgccgtga caccgcggc ctcgcactcc acgtgagggt ccgcgccag 360  
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<210> 2703  
<211> 433  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E10

<400> 2703

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gcgagatcga gggccaccac ctgacctccg ctgccatagt cggccacgac ggcgccgttt 180  
gggcccagag caccgcattc ccacagttca agacagagga gatgaccaac atcatgaagg 240  
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tgggtcatcca aggcgagccc ggcgctgtca tccgcgggaa gaagggatct ggaggcataa 360  
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 gccagtgcaa cat 433

<210> 2704  
 <211> 365  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-029-Q1-E1-H10  
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 gcccttcgac acgccgggtcg acgacttccc ggtgctcatc ggcgactggg acaccaagga 180  
 ccacgccgtg ctggccaaga acctggacgc cggcaagggg atcgggcggc cggcggggct 240  
 ggtgatcaac ggcaagaacg agaaggactc gtcgaacccg cccatgtaca acgtgaaggc 300  
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<210> 2705  
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 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
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 ccgtcgtggc gctgctgtcc gccggcctcc tcccgcaggc gctgggtaag ggtaggggag 180  
 gcaggggaca cgggtggcgcc gtcaacccgc aggtcgccgg catctgctct cgcaccccg 240  
 tcccggaggt gtgcacgtcc accgccgggc ggcacgcgtc caagtacccg gtcacgcaca 300  
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agcacgtcgc gaggtcnngc cgcaccatcc cgccgc

396

<210> 2706

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-H12

<400> 2706

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tcttctactt cccgtccatc ggcatgcagc gggcggcggg cgggtacggc gccatcagcg 180

tggtgagccg cctcctcatc ccggteccct tcgaccagcc gccgcgggag agcgaccacg 240

cggtgctcat cggcgactgg tacaccaagg accacgaggt gctggcgcg cagctcgacg 300

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tggaggccgc cgcgcccatg ctcacct 387

<210> 2707

<211> 287

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-H2

<400> 2707

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ttcagtcata tgacgtgtag gaagctgtgg aaggtcctga ggagcagcag cgggtggcggc 120

gatctggatg aagactccgt ccccgacact gtgcaccagg acggcgggga agcacgcca 180

caagtacaag gtggtggacg cggtgacggt gctagagatg caggtggacg cgttcaagaa 240

gcgcgtgaag gcggcgcgga ggctcgccaa cgatgaggtc aagacgg 287

<210> 2708

<211> 280

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-H3

<400> 2708

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gctcgcgtcg gccgcccccg cgggccagcg agagcgaggg acaacgaccg accgaccgac 180  
cagctcgagg tgaatgaaca gccgcatacc gttcctccag aaaatgcacc gctggatcat 240  
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<210> 2709

<211> 280

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-H4

<400> 2709

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cggcgacgac cttcgccgtc atcttatccg tcctcttctg tgccgcggct ggcaccgccg 180  
tcgacaacga cctccccgac tacgtcatcc agggccgcgt ctattgcgac acctgccgcg 240  
ccgggttcgt gaccaatgtc accgagtaca tcgcgggcgc 280

<210> 2710

<211> 303

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-H5

<400> 2710

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ggcagtgttt caggagctg tcgtattctt gtttctctc ctgcgcgag cagaagtggg 180  
aaccatcgat gccaaaatgg gagtagccat gcccatgcat gccttgataa tggagaaagc 240  
gaaacagcat gagacggaga ataaggagga gaaaagcagg gagaaggaag agagtcaatg 300  
ctt 303

<210> 2711  
 <211> 288  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-029-Q1-E1-H7  
  
 <400> 2711  
  
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 tgctgtacgt cctccacggc gaccggggca tggactacgc ggcgctggac tggccgacgc 180  
 ggctcaaggt ggccgtcggc gtcgcgcgcg gcacggcggt cctccacacg gcgctcgccg 240  
 gacacgaggg gcccacggc aacctcaagt cggccaacgt cctcctcg 288

<210> 2712  
 <211> 421  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
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 tacgggctga tcagcgtcca cagccgtgac ctgatcccg tgccttcga cacgccggcc 180  
 gacgacttcc cgggtgctcat cggcgactgg tacaccaagg accacgccgt gctggccaag 240  
 aacctggacg ccggcaaggg gatcgggcgg ccggcggggc tggatgatcaa cggcaagaac 300  
 gagaaggacg cgtcgaaccc gccatgtac aacgtggagg ccggcaagac gtaccggttc 360  
 cgcgtgtgca acgtgggcat caaggcgtcc ttcaacgtcc gcatccanga ccacatcatg 420  
 a 421

<210> 2713  
 <211> 440  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-030-Q1-E1-A1

<400> 2713

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gcgagagca tgaagattgt ggcgctggcc ttggtggccc tgctggtggt ggcggcgggc 180  
gcgcccgtgg ccaccgctga cggctgctac gacgactgct acgagcgctg cgccaacggc 240  
aagaaagacc ccgcctgcac caagatgtgc aaccaggcgt gcggctccac ggaccaaggc 300  
gccggtgccg ccggcgccgc gccggcttga tcgcccagcg cattcatcgc ttcagctcga 360  
tataatcgct gtcctgcag caaccacat atgattcgat caatcttctt cctctaattt 420  
ctcgaccccg tcgaattttt 440

<210> 2714

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A10

<400> 2714

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gcgacgtctc ctgcgtgggg cactgcctc cgggacagga cctccaccgt ggtgcgacat 180  
gggacttcac cttcgcggcc gcgaagccgg cgaagaggaa gacggcgagc gatgtgggg 240  
tctccgacat gttcgccgtc gcaccggcgg gggattggtt cggcgggcgg tcgacggcgc 300  
catcgccggg gccgtcatcg gccgtcaccg acgaagagtt taacctggag atgcatcagt 360  
tcatgtcaat gctaccactg tctgacgagc acggctggaa cgcataatgc ggccgggtaa 420  
aatggaaatc g 431

<210> 2715

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A11

<400> 2715

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cgacgcaaag gccaaggacg cccctgtcat ctgcgcgcc ttcgagagca tcccggagct 120  
ccacgagggc gccatgaagg gaaagtggga agctactcct tcgccttccc aaacttggtg 180  
gaggacaaga tgaactactc caaggagccg tctcagcagg acctccagcc ggagccagca 240  
gcggcatcgg cggaggcggc caacaaggcc gtgccaacac cggcagaagc tgaagcgagg 300  
gcagacggca gaggcgcagc cgcagacgag cagcaacccg gaggcgactc cggttccggg 360  
agcaggacga aagggcggct tgttctcaag cttcccctgc tgc 403

<210> 2716  
<211> 411  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A12

<400> 2716

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cgcgacgtgc gccgcgtcac gtacctcgac tccgacgtgg tcgtgggtgga cgacgtccgg 180  
acgctggcgt ccgtggacct cgcggggccac gtggtggcgg cggccgagta ctgccacgcc 240  
aacttcagca actacttcac ggacgccttc tggtcgcacc cggcgctcaa cggcaccttc 300  
cacgggcgcc gcccatgcta cttcaacacg ggcgtcatgg tcatggacgt cgacaagtgg 360  
cgcgccggcg ggtacacgcg ccgggtggag gagtggatgg ccgtgcagaa g 411

<210> 2717  
<211> 419  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A2

<400> 2717

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tgatggtggt ggagggcaac catgagatcg agcagcagat ccacaacagg acgttcgcgg 180

cctacagctc ccggttcgcg ttcccgtcgg aggagagcgg gtcctcctcg ccgttctact 240  
 actcgttcga cgccggcggc atccacttcg tcatgcttgc gtcctacgcc gactacagca 300  
 gatcaggtgc gcagtacaag tggctggagg cggacctgga gaaggtggac aggtcgggtga 360  
 cgccatggct gatcgccggc tggcacgcgc cctggtacac cacctacaag gctcactac 419

<210> 2718  
 <211> 394  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-030-Q1-E1-A5

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 gcggctgctg atgacgattg caagcctgcc ggtgacgagt caacgtcgtg gaagcgcctc 180  
 gtggacggta tgcgcccgtc ccgcctccgc gggcagctgg agtactaccc gccgccaccg 240  
 ccgccaccgc cgctgggcca cgccgatgtg taccatgacg tgatcctccc gccgccgtcg 300  
 caggcacggt tcggcttcga gatcaaggag gtgggcatga ccagccgcta cgcgtccgct 360  
 gaggatctng cacagatgga cagcgaccag gaag 394

<210> 2719  
 <211> 441  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A6

<400> 2719

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 gcaagtgagc aagctatata tatatatagg agattcttcg agcgagctag tagcgagatg 180  
 ggttccgcgc tcctctttta ctgcactctg atcgccgtcg tcgtcgcatt gtcgtcgtcc 240  
 atggtcgcgc tcggggccgc cgccccgggg gaaaccccca agttcatctc ggcgagcgcc 300



cttgagtgct ccgctaacgt aacggaaata gcaaaggcgc gcaagctgat cgatgtccat 360  
ggccacgggc tgtgcccggg gcggttccga cacacgcgcg ggatcagcgc ggtggcaaca 420  
actgcaagga ccgccgctg c 441

<210> 2720  
<211> 342  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A8

<400> 2720

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ggatctgctg tccgccgggc tcctcacgca ggcgctgggt aacggtaagg gaggcacggg 180  
acaccgttgc cccgtcaacc cgcaggtcgc cgggatctgc tcgcgcaccc cgttcccgga 240  
ggtgtgcacg tccaccgccg ggcagcacgc gtccatgtac ccggtcatcg acaacctggg 300  
cgtgctgaac atggacgtgg acgcgttcgc caagcgcaac gc 342

<210> 2721  
<211> 428  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A9

<400> 2721

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agggctgcgg ctcatgctac gaggtgagat gcaaggaaaa acctgagtgc tcgggcaatc 180  
cagtcacggg gtacatcact gacatgaact acgagcctat cgctccctac cacttcgact 240  
tgagcggcaa ggccttcggc tccctggcaa agcccgggct caacgacaag attcgccact 300  
gcggcacatc ggacgtcgag ttcagaaggg tgcgatgcaa gtaccccgcc gggcagaaga 360  
tcgtgttcca catcgagaac ggctgcaacc ccaactacct ggccgtgctg gtgaagtatg 420  
tggcggac 428

<210> 2722  
 <211> 421  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B10

<400> 2722

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gcaccaggac ggcggggaag cacgccaaca agtacaaggt ggtggacgcg gtgacggtgc  180
tagagatgca ggtggacgcg ttcaagaagc gcgtgaaggc ggcgcgaggg ctgcaccaagg  240
aggaggtcaa gacggccgcg acgcccaggg cgcgaggagg gctgaacctc tgcaagacct  300
actacctgga cgccgccgac aacctcggcg cctgcaagcg cgccatcggc ttccgcgacg  360
ccgtcaccat ccgcgccacg atgagcatgg tggcgagga cacgcagaac tgcgacgagg  420
a                                                                 421
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<210> 2723  
 <211> 417  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B11

<400> 2723

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tgtgtaggca ggcagacgca ccgcgcatgg ccgaggcgcg ctgctctgcg catggccttg  180
ttgtgcatgg ccgcaccgt cgggtgcgctg gggacagggc ttgtccgcgc cgagccttgc  240
cgtcgcggcg ccgtccggtg tggtatagtt gtggccaccg acgacataaa aatttcacgc  300
atacagtgaag agcggagagg aagagtaggt tccataccat tacccttctc caactaggag  360
cgatctgttt tcttctacc agcaatttct ctccgttttc tcgcgagtcg tgctgat   417
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<210> 2724  
 <211> 425  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B12

<400> 2724

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ccttcgccgc tggactcgtc ggtgtctacc ttccatgcc ggactccgac tacagcttcc 180  
tcaagttgcc acgtaatctc gaggaactcc aaatcctcac tggccacctt gagaactata 240  
ctagtgacta caccctacag gtgttggtag gttattgcgc tgtgtacatc ttcattgcaga 300  
ccttcattgat ccaggggaca atattcatgt cactgcttgc tgggtgctctg tttgggcaac 360  
tgcggtggcct tgcgctggcg gtctttgctg ccactgcagg tgcttcttcg tgctatttcc 420  
tgctcg 425

<210> 2725

<211> 457

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B2

<400> 2725

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cggccagacg cgggcacgat atgcaggccg ccgcccgcgc cccatggatg acgaagaccc 180  
tgccggtggt tgggaaccac ctcggaacc ccacgcgcct cacaagcgcc tcctcgctct 240  
tccacagtac gccgcctcc ttcgccaagt ggaggaacaa atgggactgc cacaagagcg 300  
aaaaaggagc acgaaaggca tccaggaatt atgagaggta tgtagttcgg caaaaacgag 360  
cagaaggaaa gaaggcccta aagggatatc ttctctatgg aaagccatgc ctcatattaca 420  
ggatggaaca caggtagctt tgctaactca catgcaa 457

<210> 2726

<211> 93

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B3

<400> 2726

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ccttcctcca gcagtcggg ggccaggacg aca 93

<210> 2727

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B4

<400> 2727

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ggcggtagcc ccttcctat cagcctcat cgaatcctca gatctaagtt ttttttggtt 180  
ttgtgagtta tccaaagttg gaccgcaaag atgagtactg ctaatcacta tcagcacatc 240  
aagtcaacca agcctgttgt agatctacta atattggagt gtttctttgc ttaaaatgtg 300  
gagatgttca tagggcactt ggacctgaca tttcaaaggt tttatctgta actttggatg 360  
attggtctga cagtgatatc gactcca 387

<210> 2728

<211> 350

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B5

<400> 2728

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acgtgtacta cgacaacgac gaagaagaat gaacagctag cagacgtacc ggcgccgat 180  
tcacaagtgt acagaaaacg atcgactcca ctccaactat acatataccta ctatggcttt 240  
tgctacaacc cgatggatca gaaggcatgc atgcatgtac aggcaggcat ggccatggcg 300  
atgcctgcag gctgcaaacg aatttgatca gatggctgac accttgggga 350

<210> 2729  
 <211> 365  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B6

<400> 2729

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tcatctaccg ggacttcaag agctccaaca tcttgctoga cgcgaaattc aacgccaagc 180
tgtcggactt cgggctcgcc aaggaagggc cgatggggcg tgagacgcac gtgtccacca 240
gggtcatggg cacctacggc tacgccgcgc cggagtacgt agccaccggg cacctgacgg 300
tgatgagcga cgtgtacggc ttcggcgtgg tgctgctgga gatgctgggt ggacggcgcg 360
cgctg 365
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<210> 2730  
 <211> 410  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B7

<400> 2730

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cccaaggctc tctgcgagca gccgcggcgg cggcgcccgt gcgtcctctt tagcttctcg 180
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tccgcgcggc ggcccggtgt cctcctccac ggcttcggcg cgtcggcgac gtggcagtgg 360
gccccgtacc tccgcagcct cctcgcgggc ggctcgcacc ccatcgctcc 410
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<210> 2731  
 <211> 405  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B8

<400> 2731

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tatggaatgg atgacgcaga tgacatctac atgcgatcat ggactggcac tattattggc 180  
cctcataata ccgtccatga gggtcgcac taccagctga agttgttctg cgacaaggac 240  
taccctgaga agccaccatc agttcgattt cattcaagaa taaacttaac atgcgttaat 300  
catgaaactg gagtgggtga cccgaagaag ttcagcgttc tgggtaactg gcagcgtgat 360  
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<210> 2732

<211> 458

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B9

<400> 2732

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gcacccctgc ctacacacac ctgccgccgc cttcccagcg cgcggaacacg ctccgcgccg 120  
tcgatcctcc atgggtcaagg catcggggcga aaccagcaaa tatctcgggg cgcggtggaa 180  
cgtcccatga tgactgctcg cgcggggggg tccaatgctg gcggaagtgt tgccgtaaag 240  
cttcggcgcc tcggaacttc tcgccatcgg tgatgggtcca ccgtggaccg catccctccg 300  
catctatgct cgactccacg cagcgtgagg acacgtgtca tctgaagagc aagttgggac 360  
ctggaatctc aagccctaag tcaagaacag gtaccgcatg ttgaggcgct tggaggatgc 420  
tgccatgtgt tcgtgagtgg tctaggccgt cgtctccc 458

<210> 2733

<211> 72

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-C1

<400> 2733

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gcataccgac gg 72

<210> 2734  
<211> 404  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-030-Q1-E1-C10  
  
<400> 2734

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tttctcttcc ctcttccaca gatgcaagta ctttgagtga acaaactcca aatcaggaaa 120  
aggatgctgt cacccttatg ctcagtgttc gtcaggcaaa tcttcttctt tctctgttat 180  
ggactcagge actgtcacct gaaaatgttc cacggaatta tgaagcaatt tctcatactt 240  
acagcttgat gctattgttt tctagagcca agggctcagg tgccgacgtt ttggttggtta 300  
gctttcagct tgctttttca ttaagaagtg ttctgttaca agcaggtttt cttccacctt 360  
cacgcaggcg ctctcttttt actttggcaa cttcaatgct tgtg 404

<210> 2735  
<211> 394  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-030-Q1-E1-C12  
  
<400> 2735

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ccagtgcaat aacatagctc atccattcat tctcttgaa cttgattggc atccatattt 120  
gggatctcca cttcatctgg aaagcagcct gcataatgt cgatactcg tgtaaggtag 180  
atgctatata aactgtcaga gtatattggg catgttagaa tatattagac aactactaat 240  
atgattggtt taggattgat tataatcctg gataaccttc cttgtatcta agataacatt 300  
ccttgatatc aagataatct tccttatctc taggatagcc ttcttgtctt caagtcgtgt 360  
attcctatat attctctcta aaggcttcat tgan 394

<210> 2736  
 <211> 398  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-030-Q1-E1-C2

<400> 2736

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catataccta gcagtgtctc tgcataaaaa gataaaaggt angangangc gcagtgcgtg 120
gtgggattat ttgtgangag atattggagt tattatatat atatatatat aggtagacga 180
tagatagaca gctagatcta tataaccatg gtggatgggt tccgatggat cagaccgggc 240
tctttcgtcc tgtacttggg cttcttcttc ctgtccgcag ccctgtcgga ggccaatata 300
ggcgacttcg atgaatactg gcagcagcgc aagctcatgg ccgacgccgc ggctgaagcc 360
acgtacaagc atgaccgggt cgaagtcgcc aaccaact 398
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<210> 2737  
 <211> 398  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-030-Q1-E1-C3

<400> 2737

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nagctttccc caattcccc cttctccca tttctacca ccgccgccgc tcccccggtt 120
caacaacacc atgaggaggt gcatctcgat ccacatcggc caggctggta tccaggctcg 180
aaacgcgtgc tgggagctgt actgcctcga gcatggcatt caggctgatg gccagatgcc 240
cggtgacaag accattgggg gaggtgatga tgctttcaac accttcttca gtgagactgg 300
cgctgggaag caggtccccc gtgctgtttt tgttgacctt gagccactg tcatcgatga 360
ggtgaggact ggcacctacc gccagctctt ccactctg 398
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<210> 2738  
 <211> 385  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB148-030-Q1-E1-C4

<400> 2738

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ccgccaacgc caaccagccg gccaacgtcg ttccaccgca agtagtggtg tcgaagcttc 120  
cgccggaggt gctggccaag ctcccggccg acgtgctggc cagcatcccg ccggagacgc 180  
tgccaacat cgcggcgtcg caggggcagc tgcagacgag cgagatcctg gccaccatcc 240  
ctgcggcgca ggcgcagggc cagctgccgg cggacctgcc gccggatgtg ctggccaagc 300  
tcacggccgt gcagagccaa ctgcggggca acattacgcc cgagatgatg accagtctcg 360  
ccgccgtgca gcagcctgca gctgc 385

<210> 2739

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-C5

<400> 2739

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tccatgggag agcctccaac ctccctgtg tactctctcg aaccaagtg caaggtgccc 120  
ccgcgtgtc tatggccgca cgcgcctggc cttgccatct gtggagctcg gcagccggag 180  
ccgcgtatcc gcccgggctg tggtcgaccg gcttcgcttc attaatctgg cgcgagatta 240  
cgagtcacct gaagatcatc ctggtacctg gaatctcaag tcccaggta agaccaggta 300  
ccgcaggatg aggcgcgtga aggatgctgt gatgagttcg tgagtggctt aggccgtcgt 360  
ctcccagtca acttttgggt tgctggacgt tgtctctta taatgtaaat actta 415

<210> 2740

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-C6

<400> 2740

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ccatatccaa agttctcaac atcgcttcgt gcagcctgca tcggtcgacg agggctgcac 120  
gaacgatggg gtccgcctcc gcctcagtga cgacaaccag cctgctggcg ctggcgctgg 180  
cagcgctggc tttcgtctcc agggccgcgg cgcagggcaa cggctgttcc agcgtgatga 240  
tgaccctggc cccgtgcatg gacttcatct ccagcaaggc gtcggagccg gggatctcct 300  
gctgctcggg gctggccgga gtcgtgcaga ccgacccccg ctgcctctgc atggtaactgg 360  
acggcactgc cacgtccttc ggcacgcgca tcaaccagac caaggcgctg gagctccccg 420

<210> 2741  
<211> 375  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-030-Q1-E1-C7  
<400> 2741

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cacagcagcg acccctacgt cgtcctccgc cacggacagc agaaagtcaa gtcaagtata 120  
aaataccgca cgatcaatcc ggaatggaac gaggaactca ccctgtccat cacaaacatg 180  
atgaacccgg tcaagattga actcttcgac catgacacgt tcaccaagga cgacagcatg 240  
ggcaacgcgg agttctccat cctcaacttc gtggagatcg ccaagcagga cctgagcgac 300  
gtcnccgacg gcacgggtgat gaagacgatc cacacggaga agggcagctg cctcgccacc 360  
gacaggcaca tcacg 375

<210> 2742  
<211> 389  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-030-Q1-E1-C8  
<400> 2742

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tcgccgtcgt ccggcagggg taatataatt tggttcttct ccggccgggt gtgcatggca 120  
aaacgaccca cggtgcccaa gttcggcacc tgggacagcg gcaatgccgg gtacacggcc 180

taatttcgaca aggtgcgcga taacaagggc gcaacggcgc cgccgctgcg ccggccgcgc 240  
agccccaacg accccgaccc cgaccgcgag cccgagccat aggagggggc aatgaggaga 300  
gtccccccgc cgtcgtcgtc gatgcccggc accgcatgag gccaccgcga gccgcccgcg 360  
ccggggcgcc gccacgggca gagccaccg 389

<210> 2743

<211> 173

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-C9

<400> 2743

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actgcaataa ctgtcgttac ctatgcttct cacctgtgat tttttggaca caatatgtta 120  
aggtccattc aattctaattg agacgcctga tgaggctact agcaaacaac aaa 173

<210> 2744

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D1

<400> 2744

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caacgagctt ctgtccgac gaacacgacg cccccccaca gccacattgc cggacaacgc 120  
cgtcgcccc cgaaccggcc tttgccggcg caagggccgg cctcgctgt ctccaagcaa 180  
ggaagcagca gcagcaaccc cgacgacccc cgctgcggca gcagcagcag cgacgaccac 240  
taccagcacg acgtgatcat gctgaggcgg acaaggagcg ggcgggcatt cccgccgccg 300  
atctccgtga tcggcaaggg cgggcggccg tggctctgcc tgcgggcgca ccgcgagggg 360  
ggacgcctcg tgctgcggca gatgcgcctg ccgtcgcagg agctgctgca gccctgc 417

<210> 2745

<211> 415

<212> DNA

<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-030-Q1-E1-D10

<400> 2745

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cggacgtcgt cgctcgttctg acttctgagt ttctgaccga agctgaccgt accacgtact 120  
agtcaaccac caccaccatc accgtttgca tgcattgcgtg cgtgcgtgcg cgcttgctg 180  
gacgcagtat ttgtacacgt gtgcatgccg gcttgacggg taactgacgt gtatgtagct 240  
actagctcgg atctggatgt cttttgtgtc tacgtagggt acgacgagga gacgatactg 300  
taaggtggca tgcattgctc agggagctgt tctggaacac ccttccaaag acgctgacgt 360  
gtcagcaat gccatccgat actatggaca gcaagtcagc aacgagccan aagat 415

<210> 2746  
<211> 429  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-030-Q1-E1-D11

<400> 2746

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acatgtccca ccgcgtccgg ctgcggcgcg cggcgctcgt cgcggtcgcg gcgctggccc 120  
tggcgctcgc ccccgggccc gcggccaagt ggcagcggac caggaacggc accgtggtca 180  
gctacgaccg ccgctcgtc atgttcgacg gccaccggga aatcttctta tccgggtcca 240  
tccactaccc gcggagcccg ccggacatgt ggccggagct catcgccaag gccaaggang 300  
gcgggctcaa caccatcgag acctacgtgt tctggaacat ccacgagccc gagaagggtg 360  
agttcaactt cgaggggcag aacgacgtgg tgaggttctt ccagctgac caagagcacg 420  
acatgtacg 429

<210> 2747  
<211> 377  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D12

<400> 2747

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gatgggcatc tacggcaagg agaaggcgac ggtgacggtg tcggacgggc ggatggccaa 120  
gctccctggc ctcatcctgg gctgctccgt cctggaggcc ggcggcagcg tggacgcca 180  
cgacggcgtg ctctcgtg ggaacggcga gatgtccttc gccgtccacg ccgccaagcg 240  
cttcggccag cgtttctct tctgctcct cagcgccaat agtcccgcg acgcctcgag 300  
ctacctcacc ttcggtccca acccggcggt gatggggccg ggcacatgg agacggacat 360  
cgtgtacaac gtggacg 377

<210> 2748

<211> 392

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D3

<400> 2748

aattcacggg tcgaccacg cgtccgcca cgcgctcggc gcgatcgaga agccaggacc 60  
aggacgacga tggcccggcc gcgcctctc ctaccttcc tgctcgccgc gcggccgtg 120  
ctgaccacgg tgcccggcgt cgcgctcgcc aagtccaagc tcgccaagaa gagcgacgac 180  
gtcgtgaacg ggcccctcct gaccgagaag atccaggcga agaagacgct gatcgtgggg 240  
ccggacgagg agttcaagac cgtgcagtcc gccatcgacg cggtgcccgc cggcaacgcc 300  
gagtgggtca tcgtccacct ccgctctggc ctgcacaggg gcaaagttgt gataccggag 360  
aacaagccct tcattctcgt gaggggcaac cg 392

<210> 2749

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D4

<400> 2749

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cgacagccgc gacgcctggc agccgctgaa gctcgccgtc gagcgatacg cgccgcggt 120

ctcactcatc gtccacccgt tcccactacc ataccacaca tatgcattct atgcctgccg 180  
cgcactttac atagctaaca agttgaattc atcatcaaca tatccattgc tggagctggt 240  
cttcaagaac caggaaaagt tctacaattc tgccacatca tctctctcgg gcccttccgt 300  
agctctagga atgtcgaaga tggctgcgca gactgttggg aactcagtat ccgagtttct 360  
gtcgggcttc agcgatggga agacagac 388

<210> 2750  
<211> 358  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D5

<400> 2750

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ggtgcgcgac gtgtccgatg gcctgtgct caacgggaac gtgctgaagg cacaaaacgt 120  
ctccggaaag atcatcatct gcgaagccgg cggcgatgtc agcaccgcga aggccaagat 180  
gctaaagggc atcggcgtgg tcggaatgat cgtggtgacc ccggagtgtg tcgggtccggt 240  
aatcatcccg aggccgcacg ccatcccgac ggtgcaagtc tctaacgcgg cggggcagaa 300  
gatcaaggcc tacatccaca aggcgcgggg cccgacggcg acgttcgtct tcaaaggg 358

<210> 2751  
<211> 384  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D6

<400> 2751

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gtccccgcgc gtgtggctgc tcgccatggc actggcgctc gcctgcgtgc tgctcgtgag 180  
gtccgccgac gctgctgccg aggcgtcccc gactccaggc ggctccacct acgggtgcaa 240  
cccggccacg gacaagtcgt gcaagcccga gggcgtgggg gtggtgctgc cgggcggcgg 300  
catcgacctc gacggcgacg gtgacgagga cgagctgccg cagttccaac cccacctcat 360

gatcctcggc catggccact gatg

384

<210> 2752

<211> 433

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-030-Q1-E1-D9

<400> 2752

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tatagctagg atcgatcgtc agtaaaatgg caggctccgc cgtcctgagg agccccctgt 180  
ccgtcctcct ctacatcctc gccgccgtgc ccgccaccgc cgcggcgacg ccgaccgacg 240  
ccgccatcga cgaggcggtac gcgcattctc tcaacctcac cgctaaccag gactactggg 300  
cggagcgcgc ggaggcggcg cacgcgtaca accgcgcggc gtaccagacc gaccccggtg 360  
ccgtcgtgca gcgcttcaac gacggcgtgc acanggcgac ggcgacgcgg tcgcgggtccc 420  
tggcgcacag ggc 433

<210> 2753

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E10

<400> 2753

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gttacctcat ctttattaga atctgttgaa agtgggtgatc ttgtaagata tgggtctaatt 180  
ccggagttca ttggtcgttt gccatttcta gtaagtttgg cagctctgaa tgaaggccag 240  
ctcgttcagg ttctgacaga accaaagaat tcactttcca aacaatacag gaaaatgttt 300  
aacctgaaca aagttaggct gcacttcact gatggtgcac ttagattggt agctaagaag 360  
gcgatagcta aaagcactgg tgctcgtggt ttaagagcca tcttggaaac tggtcttttg 420  
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<210> 2754  
 <211> 432  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-030-Q1-E1-E11  
  
 <400> 2754

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acggcgggccg tgggcccgtc gctgtacacc aacggcacccg ggtgcggcgc gtgctatgag 180
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agcgggcaga agggcgagca cttcgacctc accataccgg cgttcctcaa gatcgccgag 300
gagaaggccg gcatcgtgcc catcacctac cgcaagggtg cgtgcgagag gaaaggcggc 360
atccggtaca cgatcacggn gaaccagcac tacagcgagg tgaacggtga caccgtgggc 420
ggcgccgggg ac 432
  
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<210> 2755  
 <211> 424  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-030-Q1-E1-E12  
  
 <400> 2755

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gaccaccagg gtatccatca cggcttcgaa tgggtggctta gaccatgacc tctccatcgc 180
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gtgggtggtt tttggtggtg cgggtggctgc ggtttgtgtg ctcaacaccg gactggtagg 300
caaggctctg ttgcttgag cagcgagacg gcaggcaaag aagtgatgtg aggagcaacc 360
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attg 424
  
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<210> 2756  
 <211> 334  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E2

<400> 2756

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 cttcggctcc ggcaagacaa atcaagtcgc gatggagatg aagaaggctg cctgcgccgt 180  
 cctcgccgcc gccgcctccg ccaccgtggt cctcgccgcc gaggccccgg cgcgcgcgcc 240  
 catcagcgcc tctcggcgcg cgttccccgc cgtcggcacc gtgctgggcg cctccgtgct 300  
 ctctttcttc gctactacc tgcagtaaaa ttaa 334

<210> 2757  
 <211> 417  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F10

<400> 2757

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 agatccagga caaggagggc atcccaccgg accagcagcg tttgatcttc gctggcaagc 180  
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 tcacccttga ggtggagtct tcgggatata ttgacaatgt ccaaggcaaa aattcatgaa 360  
 caaggaggca tcccaccgga acagcaacgc ctcatcttcg cccgcaagca actggaa 417

<210> 2758  
 <211> 399  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F12

<400> 2758

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gtttattatg aacttgagaa tttctatcag aatcaccgca ggtatgtcaa aagtagaagc 120  
gataaacagc tgcgttttgg ggcaaaatac acggccgact cgtgcagtcc tgttgagtgg 180  
gataataatg gttccccaat tgttccttgc ggcttgattg cctggagctt attcaatgat 240  
acatatgggt ttactcgtgg gtccaaggaa ataaagggtca acaggaaaaa catttcatgg 300  
aagagcgacc gggagcataa tttggcaaac atgtgtttcc ctccaacttt cagaacggaa 360  
ccttgattgg aggggggaaa ctccgacctt ctgtcccg 399

<210> 2759

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F2

<400> 2759

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gatcagaaga tccccctcca ccacgagatg gtcagggttc caacatttcc gtccaaattg 120  
ttcttcttct gcgaagtgga gccaaagagt ggcgagagaga cgccggttgt accgagccat 180  
tatgtctaca agaggatgaa ggagaaattc cctggattcg tggagaaact ggagaaggac 240  
atgattgtat atacaagggt tttaggagag ggcgataacc cgtcctcgtc aatcggtcgt 300  
ggatggcaat cgacatttct cactaaagat aaagttgttg ctgaggaaag ggccgcaaag 360  
ctcgggataa agctagaatg gaccgacgac agcgtgaaga cggtcatggg ccccatcccc 420  
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<210> 2760

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F3

<400> 2760

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agaggggaag tcagaggcac ggagtggcgc agagcagacg cccgtgaacc attgtagctg 180  
tccctgtcgt cgtcgtcgtc aacgaacca cacaaggaaa ggatggagaa gaagccgacc 240  
atcctcatga acaggtacga gctcgggcgc acgctcgggc agggcacctt cgccaagggtg 300  
taccacggcc ggaacctcgc gtccggcgag agcgtggcca tcaaggatcat cgacaaggag 360  
aaggatgatgc gcgtcggcat gatcgaccag atcaagcgcg agattcccgat catgcgcctc 420  
gtccgcaacc caacg 435

<210> 2761  
<211> 429  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F4

<400> 2761

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gaccgggacc tgcggggcga ggaggaggag gacacagagg agatggtgaa gctgatcagg 180  
gtccgcatgg cgtgctgcga gagcaacgtg gacaaccggg gggagctcaa gaccgccatc 240  
gacaggatcg aggagctcaa ggcgaaggag cgcgccgacg aggagcacgc gacggtgatc 300  
gaccacgact acagcgatgt tgccctcaac tgatcatcga caccgaaacgg ccgggaatcg 360  
atcgatacgg agggttgtgc gcaagctgat gatatgagcc caaaatgtga tgacctgcat 420  
gcatgccga 429

<210> 2762  
<211> 404  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F5

<400> 2762

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ccacaaggac agcagcagca aggtggaaca gccggcggac agctccttga agccggcgag 180  
cctgaacgcg ttcgacatca tctccactc cagagggttc gacctgtcaa gcctgttcga 240  
ggtggaccaa gagcagaagg ccagcaactc gcggttcatg acccagaagc cggcgctcggc 300  
gatagtgtca aagctggagc agatcgctga gacagagcgc ttcattggtga aaaaacagga 360  
cgggctggtg aagctgcaag ggtccaagca agggaggaag gggc 404

<210> 2763  
<211> 405  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F6

<400> 2763

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caggtcgact tcacaagcga cgcgtggccg cgcatttctgc cgagcgcaaa ggacctctgc 180  
aggaagatgc tcacctctga cccaagacg aggatctctg cctacgacgt cctcaaccat 240  
ccttgatca aggaagacgg tgaagcgctt gacacgccac tggacaacgc tgtcatgaac 300  
aggctcaagc agttcacggc aatgaaccag ttcaagaacg ccgcgctgag ggtcattgcc 360  
gggtgcctgt cacaggagga gatcaggggc ctgaaggaga tgttc 405

<210> 2764  
<211> 404  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F7

<400> 2764

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ctcgggcccgg aggacctcct cctccacctc ctggaggaaac aagagcagca gcagcttcac 120  
cgcgcggtac atccgttgtg cgtcctccgt cgtcgacaca caccaccagc accgtggtga 180  
tgatgatgat gacgatggcg atgaagacga cgagtacgac gactgtcgtc taccgtcgtc 240  
gcctcctaac aaccacgcta gaagaaacac caccaccact gctgtcatct cggtccgagc 300

cttctccttc cgcgagctag ccgatgccgc aggaaacttc cgccaggaca acctcatcgg 360  
agagggaggc ttcggtcgcg tctacaaagc ccgcctgccca actc 404

<210> 2765  
<211> 411  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F8

<400> 2765

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cttcttcttc ctgtccgcag cctgtcgcga ggccaatata ggcgacttcg atgaatactg 120  
gcagcagctc aagctcatgg ccgacgccgc ggctgatgcc acgtacaagc atgacccggt 180  
cgaggtcgcg aaccaactta accgtgcagt ccacagatcc gtcgagaagg aggacattgg 240  
cacgaggcgg gagatgatgg ggacgacgac taggaagtct aagttcagcg ggccgtgcag 300  
ggcgacgaac ccgatcgacc ggtgctggcg gtgccggcag gactgggcga cggaccggaa 360  
gcgcctggcg cgggtgcgcca aggggttcgg gcgcatacc accggcgggc t 411

<210> 2766  
<211> 424  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G2

<400> 2766

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tcgaagccac gatcatgcct cttgtgtatc gctacaagat ttgggtgctt tgcaacgatt 180  
gcaacaaggt ctgagagtg aactttcacg tgattggcca caagtgcagc cactgcagat 240  
cgtacaacac ccgaacgaca tcgcgccttg cagatttatc gggaagcagc tcaccttcaa 300  
cagactcatc cgacaacaac atatagagaa gaaaccattg acagagccaa tatgattgaa 360  
gaaccgaagg aggaaatatt gtttcggggc gtgcgtgctt gccaaacttg aagactccca 420  
gccg 424

<210> 2767  
 <211> 416  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G3

<400> 2767

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atcagacatg gctgcgaagg acggctcagg gtcacaggac caggggcaca ggttgtggcc  120
catgctgtcc tacgcttgcg gcgagctatg tgtgatcatg ctgctctacg tggctgcctt  180
tgcattccat gcagccacaa ggctggcgcg catctgcggg ctcaggccac catgcattct  240
gtgcacgagg ctggaccgcg cctccatgg aaacttgcca tggttctccg cggacctggg  300
ctgttccgtg catcgggtccg aggtctcgtc tctggctcac tgcaagagcc atggccggct  360
tgcacgggtc ggcatctct gcaaatcatg cctcctttca tgcacggcgg taggtg      416
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<210> 2768  
 <211> 438  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G4

<400> 2768

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catgcgcctc gtccgccacc ccaacgtcgt gcagctgcac gaggtgatgg ccagcaagag  120
caagatatac ttcccatgg agtacgtccg gggcggcgag ctcttcgccc gcgtcgcccc  180
cggccggctc aaggaggacg ccgcgagaag gtacttccac cagctcgtcg gcgccgtcga  240
cttctgccac agccgcggcg tctaccaccg cgacctcaag cccgagaacc tctcgtcga  300
cgagcacggc aacctcaagg tctccgactt cggcctcagc gcgtcaggg agtgccagaa  360
gcaggacggc ctgctgcaca ccacctgcgg cccccgcg tacgtcgcgc cggagatcat  420
caacaagaag ggctacga                                     438
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<210> 2769  
 <211> 402  
 <212> DNA

<213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-017-Q1-E1-G5

<400> 2769

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agaaacagat gaaagacagc gacggcgagg gcaccggcgg tggcgtcgcc cgctcgacc 180

cctccaatct cccgcttccg actccacagt ccgaccggaa cctccagttc tcgggtggga 240

cggacgatga gtccctcgagc cggaatagca gtcctctctg caccggcggc gcgagccccg 300

ggtactactc ggactaccgg tctagcttca gcggcgagtg ttcgccgtac aacatgtcnc 360

cctggaacca gaccatggcg ttcccctggg cgcaacacaa cg 402

<210> 2770

<211> 414

<212> DNA

<213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-017-Q1-E1-G6

<400> 2770

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ccatcgagca cgggatcgct agcaactggg acgacatgga gaagatctgg catcacacct 120

tctacaacga gtcgcgctg gtcctcgagg agcaccctgt cctcctcacc gaggcgcccc 180

tgaaccccaa ggctaacagg gagaagatga ccagatcat gttcgagacc ttcaacaccc 240

ccgctatgta cgtcgccatc caggccgtgc tctctctgta tgccagtggc cgtaccacag 300

gtatcggtgt cgactcgga gatgggtgtga gccacaccgt ccccatctac gagggatagc 360

ccctcnccca cgccatcctt cgccttgatc tggccgggtc cgacctcacc gact 414

<210> 2771

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G7

<400> 2771

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cgccccgcgt ccttggtgcg gcgccggccg ccgcgaacgc gcccgggcgg gcgttcagca 120

actgggtggc gatgaaccag cagagctacg cgctgtacgc gcagaagtcc gtcggggacg 180

ggggcaagga gcccctggac aagaagctgt cggaggcgga gaagaagaag gtcacgtacg 240

tgggtggaccc cagcggcaag ggcgactaca ccaacatcac cgcggcgctg gaggatatcc 300

cggtgagcaa caccaagcgc gtgatcctgg atctcaagcc cggcgctcag ttccgcgaga 360

agctgttcct gaacatcagc aagccgttca tcacgttcc 399

<210> 2772

<211> 409

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-G9

<400> 2772

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accctgtccg tgcaccagct ggtggagaac gccgacgagt gcatggctct tgacaacgag 120

gcgctctatg atatttgctt ccgcaccctc aagctcacca acccttcatt tggcgacctg 180

aaccatctga tctcggcgac catgagcggc gtgacgtgct gcctgcgggt cccggggccag 240

ctgaactcgg acctccgcaa gctggcgggtg aacctgatcn cgttcncgcg gctgcacttc 300

ttcatggtgg ggttcgcgcc gctgacgtcg cgcgggtcgc agcagtaccg cgcgctgacg 360

gtgccggagc tgacgcagca gatgtgggat gccagaaca tgatgtgcg 409

<210> 2773

<211> 422

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-H1

<400> 2773

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gtttacacgg ggaagcgggt gcacgcggcc ttgttcttcg tgatgggatt ctggctgctg 120  
gacttttcca acaacacggt gcagggcccc gcacgcgcgc tgatggcgga cctcgcaggc 180  
agccacggac ccagcacggc gaacgccatc ttcgtgtcgt ggatggcgat cgggaacatc 240  
ctgggctact cgtcgggggtc caccgacaag tggcacacct gggtcccgtt cctgcagacg 300  
agggcattgct gcgaggcgtg cgccaacctc aaggccgcct tcttggtgtc ggtggtgttc 360  
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gc 422

<210> 2774  
<211> 432  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-H2

<400> 2774

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aaggcctttt tttttttgag ataacaagga ggagaggagg agatggcggg cagcatcacc 120  
tgggtgaagg cgaggcagat cttcgacagc cgcggaacc ccaccgtcga ggtggacgtg 180  
ggcctcagcg acggcagcta cgcgaggggg gccgtacca gcggcgcac cactggaata 240  
tatgaggcct tggagttgag ggatggagga tctgattatc ttggcaaggg tgttcttaag 300  
gctgtcagca acgtaaaca cattattgga ccagcgattg ttggaaagga cccactgag 360  
caggttgaga ttgacaactt catggtccaa cagcttgatg gaacctcaa tgaatggggc 420  
tggtgcaaac ag 432

<210> 2775  
<211> 442  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-H4

<400> 2775

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aagatgtcgt ggcaggcgta cgtggacgag cacctgatgt gcgagatcga gggccaccac 180  
 ctcgcgccgg cggccatcgt cgccacgac ggtgccgcct gggcgagag cacggcggtc 240  
 cccgagttca agaccgagga catggccaac atcatgaagg acttcgacga gccagggcac 300  
 ctcgcgccga caggcctggt cctcggacct accaagtaca tggatcatcca aggcgagcct 360  
 ggtgccgtca tccgtggcaa gaagggatca ggaggcatca ccgtgaagaa gacagggcag 420  
 gcactcgtgg ttggcatcta cg 442

<210> 2776

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-H5

<400> 2776

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 cgacatccac aggggggagg ggaaaacacg tgcattcacc cggcggaat aatggcctcg 120  
 gttccggctc cggcgacgac gaccgccgcc gtaatcctat gcctatgctg cgtcctctcc 180  
 tgtgccggcg ctgacgacct caacctcccc gactacgtca tccagggccg cgtgtactgc 240  
 gacacctgcc gcgccggggt cgtgaccaac gtcaccgagt acatcgcggg cgccaagggtg 300  
 aggctggagt gcaggcactt cggcaccggc aagctcgagc gcgccatcga cggggtcacc 360  
 gacgcgaccg gcacctacac gatcgagctc aaagacagcc acgaggagga catc 414

<210> 2777

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-H6

<400> 2777

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 caaggagaag tacgagccgc tgtggatcaa aggcgggtgg cattgcaacc tggagacgta 180  
 cccggagtac atcaggcacc tgcgcaagtt cataaacgcc atggagaagc tggcaaagga 240

cagcaaggcg gccagggcgc cgccgcgcgc gagcatggcc gacgaagtaa gacgcaccaa 300  
 gtgcttgaga ttccggaaga gatgaggctg gcggcgaggc catgcggggtc tcggccgtct 360  
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 cacgtgc 427

<210> 2778  
 <211> 416  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-017-Q1-E1-H7

<400> 2778

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 accactgaag ctggaggtgt tcgacaagga caccttcagc agagacgacc ccatgggaga 300  
 cgcgagggtg gacgtggcgc cactgatgga ggcggtgagc atgaaccgcg gggaggagag 360  
 tctgangaac ggcgccatca tcaggtccga gcggccgagc gccaggaact gcctcg 416

<210> 2779  
 <211> 398  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-A1

<400> 2779

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 ggcaaggtgg cgcagctgca agacgtgggc ctgggttgct cctccacgca tgatggccag 180  
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 cgcgcgcccg cgcgcttcgg tggtagcttc tctactgcc tcgtcgacca cctcgccccg 300  
 cgcaacgcca ccgggtacct tgccttcggc ccagggcagg tgccccggac cccggcgacg 360

cagacgaagc tgttcctgga ccccgcatg cccttcta

398

<210> 2780

<211> 343

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-A10

<400> 2780

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agaggctgat cgattggtag atacgtactc ggggtggagca gagcaacgag agacatggcg 180  
acgacgacgc gtgttgccgc cgcgccacc ggcgtgctgc tggtcctgtc ggcgttggcg 240  
accctgtcgc gggccgagga cccgtacctg ttcttcgagt ggaagggtgac gtacgggaac 300  
aagtccctgc tgggctgccc ccagaaggctc atctcatca acg 343

<210> 2781

<211> 469

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-A12

<400> 2781

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gcaacattgg aggaaaagcg ggaggagtg gaaatgcata tactggagct gatgcaggta 180  
caagtgtttc aggtggagga tccggtggcg ccagtgcagg taccagtgtc accgtgggtg 240  
ctggtgtctc cggagggtgcc aaagttggtg gtggcgtagg aggaaatgca ggaggaagtg 300  
gcaacgtcta tactggaacc ggtgccgatg caggcgtttc tggaggagga tccggtggcg 360  
ccgacggtgg tattggacct aacatagggtg ctggtgtctt cggaggcgtc aaatttgggtg 420  
gcggcccgga aggaattgta ggaggaattg gcagtgtctc tgcaggtgc 469

<210> 2782

<211> 401  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-018-Q1-E1-A2  
  
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 cgcattcccc gagttcaagc ccgaggagat ggctgccatc atgaaggatt tcgacgagcc 180  
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 cgaacctgga gctgtcatcc gtggcaagaa gggatccggg ggcatactg tgaagaaaac 300  
 agggcagtca ctcattcattg gcatctacga cgagcccatg actcccgggc agtgcaacct 360  
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<210> 2783  
 <211> 434  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-018-Q1-E1-A3  
  
 <400> 2783  
  
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 tcgttctgct gcttctcattc aacacaggct ttgtcctgcc cgtccattcc gaggactgct 180  
 gggccgacac ccgcgtcattc tgcaccaaga cgcacaactg ccgggacgac acttgcgcg 240  
 ggcgcggcat gccggacggc cgctgccact gggagttccc caacctgggtg cccttctgcc 300  
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 atgatggatg gtgcccact gcgactgcc agtctgctcc attcgttgtt gtttaaggca 420  
 taatatataa actg 434

<210> 2784  
 <211> 416  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-A4

<400> 2784

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gcccacgcgg gcgcgcgcat cgtgctggag gtcgagaagc gcgccgagca gggcaccacc 180  
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gaggacatcg ccgtgctgga gacgctgtgg gccgtctcca tgggcggcgg cgctgctccc 360  
ggtagctcgg acatggacgg ccccgacggc gagatggggg acatgcgccg gagctt 416

<210> 2785

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-A5

<400> 2785

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tcatatacct agcagtgtct ctgcatagaa agataaaaagg taggaggagg cgagtgcggt 120  
gggtgggatta tttgtgagga gatattggag ttattatata tatatatata ggtagacgat 180  
agatagacag ctagatctat ataaccatgg tggatggggt ccgatggatc agaccgggct 240  
ctttcgtcct gtacttgggc ttcttcttcc tgtccgcagc cctgtcggag gccaatatcg 300  
gcgacttcga tgaatactgg cagcagcgca agctcatggc cgacgccgcg gctgaggcca 360  
cgtacaagca tgacccggtc gaggtcgcca accaacttaa ccgtgcagtc cacagatccg 420  
tcgagaagga tgacattggc accagg 446

<210> 2786

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-A6

<400> 2786

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cggcactggc tatgttggtc gcattegggt cgtgcaccac cccactcacc ttccagggtcg 180  
gcaagggctc caagcctggc cacctgggtc tcacccctaa cattgccacc atctctgacg 240  
tggagatcaa ggagcatggc ggcgacgatt tctcctttac actcaaggag ggcccagctg 300  
gcacttggac gctcgacacc aaggccccgc tcaagtaccc cctctgcacg cgctttgcta 360  
ccaagtctgg cggctaccgt atcgccgatg atgtcatccc cgccgatttc 410

<210> 2787

<211> 449

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-A7

<400> 2787

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ccggtcccca acccctgtcg caccgcagcc gccggccatg gcctgcctca ccgacctcgt 120  
caacctcaac ctctcggaca acaccgagaa gatcatcgcg gaatacatat ggatcgggtgg 180  
atctggcatg gatctcagga gcaaagcaag gaccctctcc ggcccgggtga ccgatcccag 240  
caagctgccc aagtggaact acgacggctc cagcacgggc caggcccccg gcgaggacag 300  
cgaggtcacg ctgtaccgc aggccatctt caaggacca ttcaggaggg gcaacaacat 360  
ccttgtgatg tgcgattgct acaccccagc cggcgagcca atccccacca acaagaagta 420  
caacgccgcc aagatcttca gcagccctg 449

<210> 2788

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-A8

<400> 2788

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atcgtgttct tcagcacggg ctagctagct cctccctcc cagccatggc gacgccggac 180  
aacaaggggc acgggcatcc gctgcccagg tttggggagt gggacgtgaa gaatccggcc 240  
acgtccgagg gcttcacgt catattccag aaggcccgcg acgacaagaa gaccaccacc 300  
ggccctgggg ctgggaacgc gcgcgcaggc attccgccgg ccttcaggaa cggcggcggc 360  
gacggcgggt acaggcccgga cttcggcgac ggcaaccagt acacgccggc caaacgggaa 420  
aaagtgg 427

<210> 2789  
<211> 431  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-018-Q1-E1-A9

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cttgggtcgg ccttgcacgc agtangggag gatgaccgtg ctatccagga gtttcagaca 120  
gcaattgatc tcaaacctgg ccatgttgat gccttgatca atcttggtgg attgaacatg 180  
gatgctggcc gcttcgtacg ggctgcagag atgtatactc gtgtgctgag catccgacca 240  
aaccattggc gtgcgcagct aaacaaggca gtggccttgc ttgggcaggg tgaatccgag 300  
gaggctaaga aggcaactca ggaggcggtt aagatgacac agagggtgga agtgtatgat 360  
gctatctcac atttgaagac attgcaaaag aagaagctaa agccttccaa aggaaaaaat 420  
gatggtcaag g 431

<210> 2790  
<211> 450  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-018-Q1-E1-B1

<400> 2790  
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ctcctcgtcg ccaaaaccct agccctgctt ctttgccatg gcgagcagcg ctagccaggc 120



gagcctcctg ctccagaagc agctcaagga tcttgcaag aaccccgagg atgggttctc 180  
cgccgggctt gtagacgaca gcaacatctt cgagtggcag gtcaccatca tcggaccgcc 240  
tgacacccta tatgatggag gctacttcaa tgcaataatg accttcccc agaactatcc 300  
caacagcccg ccatcagtaa gatttacttc tgagatgtgg catccgaatg tttatcctga 360  
tggacgtgtt tgcatttcta ttcttcatcc acctgggtgaa gatcccaatg gttatgagct 420  
tgcaagcgaa cgatgggaca cagtgcacac 450

<210> 2791  
<211> 418  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-B10

<400> 2791

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caggcgtcgg caccatgtct tctttcaccc gcacgcagga caagtgcgcg gagtgcgaca 120  
agaccgtcca cttcatcgac ctcttcacgg ccgacggcgt cacctaccat aagacatgct 180  
tcaagtgcag ccaactgcaaa gggatcctct cgatgtgcag ctactcttcc atggacgggtg 240  
tgctgtactg caagaccacac ttcgagcagc tcttcaagga gaccggggagc ttctccaaga 300  
acttcacgcc aggtggcaag tcttcagaca aggtgaact gacaagggcc cccagcaagc 360  
tatcatctgc gttttctggt actcaggata agtgtgcagc ttgccagaaa acagtgtg 418

<210> 2792  
<211> 455  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-B11

<400> 2792

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ggaggccata ttttctttag agaactatgt tttcaccaat ctggagattc caaaaggaag 120  
gtgaacccaa cacactatcg agaaccaagg ttttatacca aggtatttaa agagggccat 180  
tcatttgatc aagatggagg ttcgtttgaa ctttctctag tgacctgtaa atgcattggg 240

gcttatgtca aaaacaagaa gaatcaaaac cagatatgct ggttatggga aaaggtaaaa 300  
tcaacagaag acagagattt tcaaagattc ctggacaacg tgcaatacaa aacaagtggg 360  
atattacgtt acgaacgtgt ctttggtgaa ggttttgtga gcaactgggtg aatccagaca 420  
acaaaagaaa ttgtgggcat gctcgatctt aaacc 455

<210> 2793  
<211> 464  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-018-Q1-E1-B12  
<400> 2793

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gaggcaaaga agaagagagc ggcggagagc ggcgaggcgg cggaggcgaa gaagatccag 120  
gacgacttct gctcgacgct gtgcgagggc aagaagggga cggacctggt cgtgtgcaag 180  
gagtcttgcg cgctctccca gcagtcacac ctggtgctgt acggcaggat ccagtgcgaag 240  
ggcaagtgcg ccgagcagaa gggcatcacg gcgcgggcca tgaaggctctg ccaggaggag 300  
tgcgacaagg cgtacgtggt gaaggcggcc gaggtcacca aggctgcag cgtcacctgc 360  
gccaaggaga agaaccgcgc ctcagcgaga actgcaagag gtctctgcacc cctcctcctt 420  
cttgaagcga aacccttga aatgaatgaa ccatgcatgc atgc 464

<210> 2794  
<211> 483  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-018-Q1-E1-B2  
<400> 2794

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acaaggatgat aggtacatgg agttggctca ccgagttgac gaagctttgg ggttcatgtc 120  
agctgctggg ctccctttag atcacctat aatgacaaca gcagaatttt ggacgtcaca 180  
tgagtgtctt cttctacctt atgagcaagc gctcactcgt gaggattcca ccacgggcct 240  
ctattatgac tgctctgccc acttcctatg ggtcggagag cgcactcgcc agcttgatgg 300

tgctcacgtt gagttccttc gaggcattgc caaccctctt ggtatcaagg ttagtgacaa 360  
 gatggaccca gcagaacttg tgcggttgat tgatatattg aatccccgaaa acagggctgg 420  
 gagaataacc atcatcacia gaatgggacc tgaatacatg aggggtgaaac ttccacacct 480  
 gat 483

<210> 2795  
 <211> 439  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-018-Q1-E1-B3

<400> 2795

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 gaaccatgtg gtcgtcgatg cgggcacatg ttgcgatggc tgtggcggtg gtgttcttgg 120  
 tgagcggcgc atggtgcggt cctcccaaag tccccccagg caagaacatc acggccacct 180  
 atggcaagga ctggttggac gctaaagcga catggtatgg caagccgacg ggtgccggtc 240  
 ccgacgacaa cgggtggcggc tgcgggtaca aggacgtgaa caagcccccc ttcaatagca 300  
 tgggcgcatg cggcaacatc cccatcttca aggatgggtc gggttgtggg tctgtcttcg 360  
 agatcaagtg cgataagcct gtggagtgtc ccggcaagcc cgtggtggtg cacatcacgg 420  
 acatgaacta tgagcctat 439

<210> 2796  
 <211> 452  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-018-Q1-E1-B4

<400> 2796

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 ggcgacggct gggcgaccgc cacttccgcc ttctcttctt actgagcgtc tccaggcacg 120  
 cttctgaatt cggagttgcc agcattcgct cgaggtgccg gaccagatct caccatcatg 180  
 caggctagcg atagattcaa cataaactct cagcttgagc atcttcaagc caaatatgtt 240

ggtacagggc atgctgattt gtctagattt gaatgggctg taaacatcca gagagacagc 300  
 tatgcctctt atattgggca ctatccaatg ctagcatatt ttgccattgc tgagaatgaa 360  
 tcgatcggaa gagaacgtta caatttcatt cagaaaatgc tgcttccttg tggcctccct 420  
 cctgagagag atgaagattg aagagctgtt gc 452

<210> 2797  
 <211> 253  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-B5

<400> 2797

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 tatacatata gcacatttgt ttcggtttgt tgatgcgcgc atgcatgcta gcagacatct 120  
 ttcttaaaaa aatttaaata atttccatct cgcattattt tagtagctac cattcatgtt 180  
 ttctgagtag ttgtataaat gctaccaccg tcctcttttg taccggcgcc gaacaaacga 240  
 aaaacacact atc 253

<210> 2798  
 <211> 425  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-B6

<400> 2798

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 tcctccggga tcacgatcac caacaccgtc attggcgctc ggcagcactg catctccatc 180  
 ggccccggga cctccaaggt gaacatcacc ggcgtgacct gcggccctgg ccacggcatc 240  
 agcatcggca gcctagggcg gtacaaggac gagaaggacg tcacggacat caacgtcaag 300  
 gattgcactc ttaagaagac gatgttcggc gtccgcatca aggcgtacga ggacgccgcc 360  
 tccgtgctca ccgtctccaa gatccactac gagaatatcc agatggaaga ctcaaccaac 420  
 cccat 425

<210> 2799  
 <211> 444  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-B7

<400> 2799

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acttcgagggc cggaacaag ggcacgtgt cttctcgtg ggtggacgag tcgcgcctgc 120
ggttcgcgcc cgaggaccgc atccgccct tcttcgagac cctcaactac tggggcatcc 180
agcggaagcg cacgcgcac agctgcgac cctgcggcca cctgcttggc cacgtctacg 240
acgacgggtcc gccggccatg cagggcaccg gccagttcgg gatggggccc agccagggtca 300
tcccgcgccg cccaggtac cgcttcaaga tcaaggccat cgccgccagc tcctcggcac 360
ctgccgccgc cgcctatgaa aagtgatgct ccatagattt cttcatctgg ttgcgtgtcc 420
tgtgtgctgt cagtgtgtg gttc 444
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<210> 2800  
 <211> 366  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-B8

<400> 2800

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acgtgtcggc cgaggtgggc atgaccgtgg ccgcgttcgc gcaccacgag ctcaacgcca 120
tcaaggacga cgacgtcctg tacaagtgca tcgacacctg ctccgaggac atcgaggaag 180
ccgtggcgca cctcagcgcc ctctctcgcg acttctccga cgccaggttc ctcgagggtca 240
agtctggct cacctccacg ctcggcggca ccgccacctg cgaggacgcc tgcaatgacg 300
caccgctcag cgacatcaag aacgtctgca gaaccaagag cttcgagttt gagaagctgc 360
tgcgcg 366
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<210> 2801  
 <211> 336

<212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
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 <400> 2801  
  
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 agtccagtag gccagaagt acgtgcagga ctccaagaac acgacggaca agactatggt 120  
 gccgcccacc gtgtacccac cgccgcaggc catggcggtcc gcatacccg cgaacaata 180  
 ttgttcgccg tacgcggggt acccggggca gccttacggg taccctgctc cgccaccgta 240  
 cgggtacaat gctgcttccc cacaaccggc gatgtacaac tacgcagcac agccggtagc 300  
 tgcaccggcg aggcattggcg gaggtatggg gatggg 336

<210> 2802  
 <211> 501  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-018-Q1-E1-C10  
  
 <400> 2802  
  
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 atcaagaatt ccttggtcag gtttcagctg tctcaagatt gaagcatgag aatgttgtcc 120  
 aactcgtcgg atactgcgcc gaagggagca cccgcgtcct tgcttatgag tatgcaacta 180  
 ggggatcatt gcatgatatc ctccatggta aaaaggggtgt caaaggagcc cagccagggc 240  
 cagtcctgtc atggatgcag cgagctagga ttgccgtatg tgctgctcgg ggtctcgagt 300  
 tcctccacga gaaggccgat cctcgagtgg tccaccgca catcaagtca agcaacatac 360  
 tgctctttga ccatgatgtt gcgaagatcg gggacttcga catctcaaac caggccccctg 420  
 acatggctgc gcgcctccac tctactcgcg ttcttggcac ctttggctac catgcaccag 480  
 aatatgccat gactggacag c 501

<210> 2803  
 <211> 220  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-C2

<400> 2803

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gcgacgggtca cgatgggtgtt aagatttcgt gccgaaatgt gatatgtttc atgctcgatc 120  
aagtaattta ttcctaattct gtgtgctgcg caaaagaaag aaaaacttcg aagtgttgcg 180  
ctactcgcta gtatgaatta attcgttttt ccctttaaaa 220

<210> 2804

<211> 438

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-C3

<400> 2804

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ctgtctgctc tcttgaattct tctttttgta aagcgtacac cacgtaggca ggatgtaaca 120  
acaacattca aggagttatc ttgactgaga tgcagatttt cagcagcaat gcagcatgaa 180  
gtcgagctaa ctgttccaca caaactactc agcaaaagggt catgggagag gtctcaagca 240  
gggtgaccct cctcctcctc ctccccctct ttttgttctg gcgattgacc cactacaaaa 300  
aaaatctaaa gattgctaca gagaccggag tactgagcan atcggggagc tgttcgcccc 360  
ctataaggat ctcgatgtat acacatgatg cgaccttggt tgttaagccc aaaaaagaag 420  
aaattgagag aattgtnt 438

<210> 2805

<211> 100

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-C4

<400> 2805

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aaaaaaaaag ttctagatca cgagcggccg ctctagagga 100

<210> 2806  
 <211> 415  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G9

<400> 2806

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ccgtccttct tcctcgcttc cgttcgcgtc cgttcgcgtc cgcgcgcgcgc cgcgcgcgca  120
ttcagggatg gagatgaaga agatcgcttg cgcgcgcctc gtcgcgcgcct cggcggccac  180
cgtggcgctc gccgcggagg ctccggctcc gggccccacc agcggctcct ccgcgcgcgc  240
gccgcgcgtc ggcgcgcgcc tcggggccgc cgtcgccctc ttcttcgcct actacattca  300
gtgagccggc cgcggccggt cgcgcggagg ccgaggaaga gacgaagcgg gagagagagt  360
gacatggctg cgcgcattcc gatgcgtggg catgtttttg attcgacaca ccttt      415
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<210> 2807  
 <211> 390  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H1

<400> 2807

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ctcctcctcg tctccactgc gtcagctgca cggaccgtgg gcgacaccgt gcaggacacg  180
tgcaacatca cagtattcct caggatctgc atggacagcc tcaccgcaca gccatagagc  240
cagaaggcta tcccgctccg gatggcataa ctgttcgtga acatcgcggc cgagaaggga  300
tgctggattg ccacgttcgt gcacgggaag tatatcaatg ccatggacag caccgtgttc  360
aagtgtacg acagctgctc ggatgacgtc                                390
```

<210> 2808  
 <211> 415  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB148-022-Q1-E1-H10

<400> 2808

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gcgactact acccgttcgc caaggggctc atgggtcgcc gcggacgcac gccgaccctc 180  
gtctacgtct gggcgggact tatctccatc accgtctccc tgctttggat caccatcagc 240  
ccgcccgcgc acaggatcac ccagggcggc gtcgatgtgt gatcatccaa gcttcaccaa 300  
cgagagatta ccaaacaag aatagctgaa attttctgga cgatttgcct agtttttgta 360  
ctgaacacta tgtctactta cgcgtactaa ttaattactg accaatagtg tctat 415

<210> 2809

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H11

<400> 2809

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acagcgagta caagaactgg gtgtggaagt cgcaggacga cctgttcttc aacggcgcct 120  
tcttcaacca gtccggcggc cagaacgagc gcatgtacga caggctcgac ctcatccagg 180  
ccaagggcgg ccagtacgcc gagtcgctca ccatgtacgc cggcgcgctc aactgccgcg 240  
tcggcaggaa gtgctagtgc gtgtgcagct ctaggetgca gctttcatca ttggcgatcg 300  
atcgtaacaa tgcaaagttg tgttgatat aactcttggt tttggaatgc cggccgtaat 360  
taatgggtcaa ctctaact gcttgccttt gcttgccggc cagcaaaaag aaggctcgag 420  
caacgga 427

<210> 2810

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H2

<400> 2810

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 gcgtccaagc cgtgctgcgc gacgggtgaag ccggtggcga cgacgaggca caggcacggg 180  
 cacgggcacg ggcacgggca cgcaggcgcg gggaagcccc ggacgctagg aggcgacaag 240  
 cagggtaaagg actgccatgg ttgctgccag aaggagagca agccgccga ggacgccgtc 300  
 gtgatcgcca ttccgggacg ggccgtggag caccggaagg aggccttccc tcacgagaac 360  
 gcgggagccg gggggtgctg cgctgcagcg cacggtgccg aagacgaggt atgcattgtc 420  
 atcagccgc 429

<210> 2811  
 <211> 433  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-022-Q1-E1-H4  
 <400> 2811

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 gagcggctgc cgcacctgcc gctgcggatg caggagcact cgcgcgcgcg gctggcggtc 120  
 gccgagcgga tgcaggggct gggcctgcgc gtgctgtacc cgggcctccc gggccacccg 180  
 caccacgcgc gcctggccgc catgggcaac cggggctacg gctgcggcgg catgctgtgc 240  
 ctcgacatgg gcaccgagga gcgcgccaac cgcctcatgc accacctcca gaacaccacc 300  
 cagttcggcc tcatggccgt cagcctcggc tactacgaga cgctcatgtc ctgctccggg 360  
 cagcagcaca gcagcgagat gccgcccag gaacgcgcgc gcgcgggcat cccccgggg 420  
 cctcgtccgc atg 433

<210> 2812  
 <211> 418  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-022-Q1-E1-H5  
 <400> 2812

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ccatccgtcg tcgccaaccg tagcaaggag ccaaggacat caccaccgcc cagcaataat 120  
 ggcgcagagc atgaggattg tggcgctggc cttggtggcc ctgctggtgg tggcggcgcc 180  
 ggcgcccgtg gccaccgcgt acggctgcta cgactactgc tacgagcgct gcgccaacgg 240  
 caagaaagac cccgcctgca ccaagatgtg caaccaggcg tgcggctcca cggaccacgg 300  
 cgccggtgcc gccggcgccg cgccggcttg atcgcccage gcattcatcg cttcagctcg 360  
 atataatcgc tgctccgtca gcaaccaca tatgattcga ttaatccttc tcctctaa 418

<210> 2813  
 <211> 404  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H7

<400> 2813

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 atgccgccgg ccggacctgc gcctgcgccc gcaccgtgcc gccgccgagc gcggtcgtgc 180  
 cgaggagcgc tcgcgccctg tccacgccgg ctggggccgtg gccgagccac caggatcgct 240  
 ccagccgagg agccgcgccc gtggaggacc gccgtggtcc gtcggggctc gccgaggccg 300  
 accggccggt gccagccgc gccggggcca gccgcgcca cgagccggtg gccagccgcg 360  
 cccgcgcgcc ggtggctgga tgcgccaggc tgctgcggcc agcg 404

<210> 2814  
 <211> 413  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H8

<400> 2814

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 gacaagatgt tctttcagag gaagaaatca aagaaagcca aagactccag aggatcgag 120  
 aagaagggga aagatgggcg tgggaagaat gatcttttcg atcgtgccaa gggagggctt 180  
 gatgccctcg caggaagcct gcaggaagcc aagaaggacg ccgaaacggc gactgagaag 240

cttcaagggg atgtgaagtc gggcatggaa acgatccggc acaagggctc aggcctcctt 300  
gagaaagcca aagaagaact cgggagtcac tccgacgcca gccgttcctc aaaggaacta 360  
gagcgaggaa gcgaggaaca ggggaacaac aaggacatgg acgctttcag tgc 413

<210> 2815  
<211> 415  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H9

<400> 2815

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gcggctgagg ccacgtacaa gcatgacccg gtcgaggtcg ccaaccaact taaccgtgca 120  
gtccacagat ccgtcgagaa ggaggacatt ggcacgaggc gggagatgat ggggacgacg 180  
acgaggaagt ctaagttcag cgggccgtgc agggcgacga acccgatcga ccggtgctgg 240  
cgggtgccggc aggactgggc gacggaccgg aagcgcttgg cgcggtgcgc caaggggttc 300  
gggcgcaaca ccaccggcgg gctggccggc aagttctacg tggtgacgga cggcaccgac 360  
gacgacgtgg tgaacccgcg ccccggaacg ctccggtggg gcgtcatcca gatcg 415

<210> 2816  
<211> 400  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A10

<400> 2816

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tgttgtccaa ctctcgcat actgcgccga agggagcacc cgcgtccttg cttatgagta 120  
tgcaactagg ggatcattgc atgatatcct ccattgtaaa aagggtgtca aaggagccca 180  
gccagggcca gtctgtcat ggatgcagcg agctaggatt gccgtatgtg ctgctcgggg 240  
tctcgagttc ctccacgaga aggccgatcc tcgagtggc caccgcgaca tcaagtcaag 300  
caacatactg ctctttgacc atgatgttgc gaagatcggg gacttcgaca tctcaaacca 360  
agccccctga aaatgctgcg cggcctcaac tctactcgcg 400

<210> 2817  
 <211> 372  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A11

<400> 2817

cccacgcgtc cgacgacaac tgccgcgccg ggttcgagac aaacgtgtcc cagcccatcc 60  
 aaggcgcgac ggtggagatg gagtgccgcc acttcgagtc gcagcaggtc cagacaagg 120  
 cggaggcgac gacgggcccc ggccgctggt acaggatgga gatcagcggc gaccaccagg 180  
 acgagatctg cgacgtgcgc ctgctcaaga gccccgagge ggactgcgcc gagatcgacc 240  
 actcccgcga ccgctgccgc gtcccgctca cccgcaacga cggcatcaag cagagcggcg 300  
 tccgctacgc caaccccatc gccttcctcc gcaaggagcc gtcctccaac tgccgcgagc 360  
 tgctccgcgc ct 372

<210> 2818  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A12

<400> 2818

gtcgaccac gcaaccgact ggctcgtgga tggctgcgcc acgacctctc ctgctgtcgc 60  
 tgctggtcgc cgtgctagcg gtggccgccg atgtcgccaa cgccggccac gccaagcccc 120  
 tgacgcctgg cgggcgtgtg gtacacgaca accacggcaa gttcacggcc gggccgtgga 180  
 aaccgcccc cgcgaccttc tacggcgggc gggacgggtc cggcaccacg gcgggcgcgt 240  
 gcgggtacaa ggacacgcgc acgcaggggt acggcgtgca gacggtggcc gtgagcacgg 300  
 tgctgttcgg tgacggcacg gcctgcggcg ggtgctacga ggtgcggtgc gtggacagcc 360  
 ctagcgggtg caagcccgac gcggcggcac tgggtggtgac ggtgacggac ctgtgccccg 420  
 ccaa 424

<210> 2819  
 <211> 239  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A5

<400> 2819

ttcgcggggcc gacccaacgcg tccgtttgaa ttcccttcga ttcattccggc acagcgggct 60

atggaccttc agcagcaagc taattaagtt ggcagcatgc accgctaacc ttatatacta 120

ctgagacttc caaattctag tatatgtaat ccttttggtc gggttcatga tcgaattcca 180

aagagtggaa aacaagcaaa aggttaaata tacatgccat ttttgagggc atttttaaa 239

<210> 2820

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A6

<400> 2820

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tcaccggggc gggctcagca tcctttcgaa gaagtaacac ttctccgtga ggctgagcc 120

cctcgccgag gtgagccaag ccggcgacag tcgccccggg gtcacgctc accaccgagc 180

cccaaccaat taataatatg tatatacagc taggatcgat cgtcagtaaa atggcaggct 240

ccgccgtcct gaggagcccc ctgtccgtcc tcctctacat cctcgccgcc gtgcccggca 300

ccgccgaggc gacaccgacc gacgccgcca tcgacaaggc gtacgcacat ctctcaacc 360

tcacggccaa gcactagtac tgggcggagc gcg 393

<210> 2821

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A7

<400> 2821

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catggcatca tcggccgcgc tcttggtgct agccctcgcg ctagtggcgg ccaccgcccc 120

acaggtagcg gaggcaaaga agaagagagc ggcggagagc ggcgaggcgg cggaggcgaa 180

gaagatccag gacgacttct gctcgacgct gtgcgagggc aagaagggga cggacctggt 240  
 cgtgtgcaag gagtcttgcg cgctctccca gcagtccaac ctgggtgctgt acggcaggat 300  
 ccagtgcaag ggcaagtgca ccgagcagaa gggcatcacg gcgccggcca tgaagggtctg 360  
 ccaggaggag tgcgacaagg cgtacgtggt gaaggcggcc gaagtcacca aggcctgcag 420  
 cgtc 424

<210> 2822  
 <211> 378  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A8

<400> 2822

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 gcgcaccgac gttgacacct gcgaccaggg ctctcaggag cgcgaggagc tcacgccgct 120  
 catggctaag caggacgcgg agctcgccaa gctctccagc aactgcctcg ccattgccac 180  
 cgctgccggc ttgcgctaga cccctatgt atcgttcggt catccatagc tgtgcatgtg 240  
 ctagctccta ggcagcagca acaacatata ctgcccctat aattaactct ccacgcatca 300  
 gagaagcttc actcatgcaa cacacttgta attgtatatc gaggaagaag atgtagttag 360  
 tgcaatcggt ccggttct 378

<210> 2823  
 <211> 416  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-023-Q1-E1-B1

<400> 2823

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 ccgcacaagc cgccgaatga gatcctggga tccccctgcg acatcctcct ccacgcgcca 120  
 tggccgcccc cgacgtcctc gcgtgccgct ccccagagtg gcgggcatgg tgcgcgcagc 180  
 tatcgccggg gtcacgacgg cgacgcgatt ccaggagctg gtagactgga tggaggagcg 240  
 gaaggcggca ttcanggacg acggcaagtg gacagagacg gtgaatctgg ggctcaggag 300

ccccgcgctc atcatgttcg ggctgcttca gttcgccatc gacagggacc tcgggttcgg 360  
gaagaccagc ctctgtctgc cctgngtgcg ccatggccgg ctgggggtccg cgtccg 416

<210> 2824  
<211> 397  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B10

<400> 2824

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agatgtatt agtgagtcca taagtacttt gaagttcgcc gagcgtgttt ccactattga 120  
gcttgagca gccaaagtcaa gcaaggaagg aggaggagga ggaggaggag aagccagaga 180  
gtcaaagaa cagattgctt gcctcagggc agcattagct aggaaagatg gagatcatga 240  
gagcatacga agcactcaat cgagcccaga catatataga atgggaacgg gtaatgcac 300  
acctgcgtcc aggcacccaa tagaagatgg gatcatagag aacgactcag cattgggaga 360  
tttggctgaa cactcacagt tcgggagcag caattcc 397

<210> 2825  
<211> 394  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B11

<400> 2825

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ttgccgagtc cgggtggggcc tccagcgtcg tgctcaagga cgggatgacg cgagccccgg 120  
ccgtccggtt cccatctgca cgccgcgccg ccgagctcaa ggcctttttg gaggaccag 180  
cgaactttga caccctggct atggtgttta acaggctcag cagatttgga aggctgcagg 240  
gagtgaagtg tgcgattgca gggaggaacc ttacatgag gttcagctgc agcacagggg 300  
atgccatggg gatgaacatg gtctccaaag gtgtacagaa cgtgctggac tacctccagg 360  
ctgacttccc tgatatggat gtcacagca tatc 394



<210> 2826  
 <211> 359  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-023-Q1-E1-B12  
  
 <400> 2826  
  
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 accctgagca aatcccttcc tggcttggtg actggattcc tgagaaagga gggttacctta 120  
 tagggaatct gcagccagct cacatggatt ttaggttctt ctctcttggc aacctttggg 180  
 ccatagcttc gtctctaact actccaaaac aagctgaggg aattcttagc cttattgaag 240  
 aaaaatggga tgatcttgta gcaaacaatgc ccctgaagat atgcttccct gcaatggaag 300  
 atgatgaatg gcgcattatt actggcagtg attctacnaa tgacccatgg tcatatcat 359

<210> 2827  
 <211> 436  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-023-Q1-E1-B2  
  
 <400> 2827  
  
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 gctttggagt tgtgctgctg gagcttttaa ccggtcgcaa gccagttgac cacacactgc 120  
 cccgtggcca gcagagcctt gtgacatggg ctacaccgag gcttagtgaa gacaaggatga 180  
 ggcaatgcgt cgatccaagg ctccgagacg aataccctcc aaaggctgta gccaagatgg 240  
 ctgctgtggc cgccctctgc gtgcaatacg agggatgaatt ccgtcccaac atgagcatcg 300  
 tcgtcaaggc tctgaacccc ttgctgcaca gccggtctgg caaccgccct actgcctcgt 360  
 cggcctccca cgctgccgag cgatccggac tgtgatttct catcgctgcg acaactttgg 420  
 ggtcacgana aaggac 436

<210> 2828  
 <211> 413  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-023-Q1-E1-B3

<400> 2828

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 cacagatatt aaggaaaggt cccgcccttt tctcccgaca tccataaggg gggaggggaa 120  
 aatacgtaca ttcacccggc tgcaataatg gactcgggtc cggctccggc gacgactacc 180  
 gcagccgtca tcttatgctg atgcgtcgtc ctctcctgtg ccgcagctga ctacccgagc 240  
 ctctccgact acgtcatcca tggccgctg tactgcgaca cctgccgcgc cgggttcgtg 300  
 accaacgtca ccgagtacat cgctggcgcc aaggtagaggc tggagtgcaa gcacttcggc 360  
 accggcaagc tcgagcgcgc catcgacagg gtcaccgaca cgaccggcaa cta 413

<210> 2829  
 <211> 245  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B6

<400> 2829

cgtagtccgt tacaactcct atagtgagtc gtattaagcc ctctgatect cgtcttcttt 60  
 cacctctcca acatgaaggt caacaccaag atcaagctgg agccgggtcat ggcgccgtcg 120  
 tcgtccgggc cgcggagcgc cagcgagcta gcagagccgc cgtcagcgta cagctccagc 180  
 acggcgcacc accccgtcga cgtgcggacc acacggaggt tgtccgtagc gcgctcgtcg 240  
 ttcgg 245

<210> 2830  
 <211> 378  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B7

<400> 2830

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 atcatcacgg gctacataac tctctccctc gcacccatgg cgacgccgga caacacgggg 120

caccggcatc cgctgcacat atttggggag tggtagtgt acaatccggc cacgtccgag 180  
 ggcttcatcg tcatattcaa caacgccagc tactacaaga agaccaccac cggccctgag 240  
 gctgggaacg cgcgcacagg cattccgccg gtcttcagga acagcggccg cgacggcggg 300  
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 ttctgtgggt gctgaatc 378

<210> 2831  
 <211> 436  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B8

<400> 2831

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 tctacggaac ctggtgtgct tcatgcaggg ctctctttcc aaggctctgc cggacagctt 180  
 tggagaacct tgatatattg tttctaaaag tgaattttga tgaaaacaaa cctatgtgca 240  
 aacgactgaa tgtcaaagtc cttcctttct tccattttta tcgtggagct gacgggctac 300  
 ttgaggcttt ctctgttcc ttagctaagt ttcagaagct gaaggatgcc attgcaatgc 360  
 acaacactgc tcgttgacgc attggtccac ctgttgaggt ttgcgaatgt tgacttgctg 420  
 gataacgcga gccctc 436

<210> 2832  
 <211> 99  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B9

<400> 2832

agtgagtcgt attaaagcgt ccgagaaacc atccattttc ttacggccgg ttattcgagc 60  
 actactcaca cctgatcatt gtcaagtttt tacttgctg 99

<210> 2833  
 <211> 387  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C1

<400> 2833

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cgcgggcgggc ggcggcggtc gtcctcctta gcttctcggc agcgcgcgac cgcttcctcc 120

ggggccgggtt cctctcggcg ggcttgcgcc cttctctcgt ccgcctcccc tcgccggccg 180

gcaccagcac cgtcgtccac ctctggggcg cgccgcggtc cgcgcgggcg cccgtgctcc 240

tctccacagg cttcggcgcg tcggcgacgt ggcagtgggc cccgtacctc cgcagcctcc 300

tcgccggccg cctcgacccc atcgctccgg acctcctctt cttcggcgcc tctcgtcca 360

cggccccga ccgtccgac accttcc 387

<210> 2834

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C10

<400> 2834

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tgtcatcccc aatgtcatca ccgccgagtt ccgcaccttc atcgagatcg tcttcgagaa 120

ccccgagaag agcatagact cctccacgt cgatggctac gccttcttcg gcgtcgggat 180

ggggcccggg aagtggctgc cggaggtgag gaagacgtac aacctgctgg acacggtgag 240

ccggcacacg atccaggtgt acccgcggtc atggacggca atcatgctga cgttcgacaa 300

cgcgggcatg tggagcgtgc attccaacat ctgggagcgg tactacctcg gggagcagtt 360

ctacatcagc gtcgtctcgc cggcgcgatc actgcgcgac gagtacaaca tgccccgaaa 420

cggcctccg 429

<210> 2835

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C12

<400> 2835

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ccctgacett tctgcaactga tctttccttg gcgtggcttc cattcacggtt ttccttcttc 120  
ctctccgtgt ttccctctta ctctctcaat gtagctctaa ctgtaacata atgttcctta 180  
aatagatata aattgtcatc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300  
aaaaaaaaaa aaaggggggg cccccaaaaa ggttcaaagc ttacttaccc ttgaatgcaa 360  
gttcaaagcc cttcaaaagg tgcccaa 388

<210> 2836

<211> 371

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C2

<400> 2836

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ccctcagcgc ggccgaggca ccggcagagt caccgaaggc aggcagtcct gccaaaggcac 180  
cggccgagtc accgaaggca ggcagtcctg cagctcctgc caaggcacc gagtctgctg 240  
ccacgagaac tgcccccgct aaggcacctc aagccgcctc caccgccgcc gctgccgctg 300  
ccccatcgtc gtcgtcgtct aagaagtctg gtccagctgc cgcgccgacc accgccgcct 360  
ctacaccgtc t 371

<210> 2837

<211> 391

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C5

<400> 2837

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atcatctcca tgcgctgaag atcgttggtg cccgccatgc ttcccgatga ttgctgccac 120

atcgtcgtctg aggaaatttc aagccccata gctgcacata tactcgactt ctactacggc 180  
gacgacggcc tgggcatga cctctttgcc gcggtgactg ccacctctgg ccattccct 240  
gccactgacg atgatgtttc ttcgtctacc gctaccaccc ctctatctg cggctacagt 300  
gaagacaccg cagctgctgg tggagccaca gcctacaccc cgttgacatc cttcgacacc 360  
actctcacag ccctcctgga ggaagagcag c 391

<210> 2838  
<211> 264  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C6

<400> 2838

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tcctctgcct caggagctat tattgtatgt gaccgtttgc gtgtcgcaaa tgttgctgag 120  
gcaacagccg tgattttctat tggaggacaa gggattgccc tttcaacgga ttagaaagct 180  
gatcagacag attatacaca gagatctgag caggcatgag ggccagctct gtggcctgag 240  
atatggcgac tgggtggtgt tctt 264

<210> 2839  
<211> 260  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C7

<400> 2839

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agcaagctaa ttaagttggc agcatgcacc gctaacctta tatactactg agacttccaa 120  
attctagtat atgtaatcct tttgttcggg ttcattgatc aattccaaag agtggaac 180  
aagcagaagg ttagatatac atgccatttt tggaggcatt tttaaaaaaa gcaaaacaaa 240  
agggcggccg ctctagagga 260

<210> 2840  
<211> 381  
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C8

<400> 2840

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ggagaagact ttccgcggag gctgaggcgg aggctacagc gggttggatg ccggtggctg 180

aggctgcggc tgcagctact ccaccccgag cgaggcatcg ccatccacgc ctgccgctgg 240

ggagactact accccttcgt caggcggcgg ttactccacc cctagcgagg cagcgccatc 300

cacgcctgcc gctgaggaga cgaccactac tccttcgtca ggccgggggg gttacggccg 360

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<210> 2841

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C9

<400> 2841

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ccttcagtgg ttcagccatc acaattggag ccatcctctt agaccgtctc cgacagttta 180

ctcacccttc ttagtcgatt gttatttaag tgcagtctct tcggagatgc aattacagtc 240

catcctctct ttcttttccc ctttctcaaa gagctaggac cttgctcgac tgagcatcag 300

gctgtagggc tctttgtgat catcttttgc cagttttctt cttgtagcag aagttgttgg 360

gcatggaact cctgttcctt tcaccaatag aagcataatg atcagcactg tgaaacaatt 420

tttcc 425

<210> 2842

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-D1

<400> 2842

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ccgttttact cagaagcaaa ggtgttggtt tttgtatatt tgtggtaccc taagacaaag 120

ggaactacgt atgttttatgg aactttcttt aagccatata tttctcagca tgagaatgaa 180

atcgaccgaa atctttcttga gctcagagct cgagccaccg atatgggtgt cctttacttc 240

cataaggctg ctccggtagg gcaaaatact ttctttgacg ttttaaaata tgttgctgcc 300

cagtccccct ctccggaaatc aaggctgcac cctcatcagg tttggtcgaa tgtattctct 360

tttttgcca aaaaaaaccc attgaataat ttgttgtaa gtgttcacca tgtttacaca 420

gataactcaa acctttttta aaggtc 446

<210> 2843

<211> 394

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-D10

<400> 2843

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actttgcacc agagaagagg ccaacagctt tagattgect aaagcatcca tggcttaaag 120

atgacgagga taaaacatgt ggggtctcta acaataatga tgccaagagc attgatctgg 180

tccaaagcac agggagtatc accaccgttg actgtacaaa tattgatttg acgagcaaaa 240

aaggcagctc cactggaact tgtgataaga ctgttgatgc aaaatacaac acaagaagca 300

ttaccagcaa tgctaccatg aacacttatg tacaaccac ttctggaagt tttgccaaca 360

gacttgcgaa aaatgttgat gtaaattccga acat 394

<210> 2844

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-D11

<400> 2844

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gaataagacg gtcctcatcg tcgcggcgat gcttctcatc acgctcgtgc tggaggccgc 120  
ccctccggcg accgccatgg actgcaaggc cgggtgtgac gaggtcacgg gccactcca 180  
catgagcatg gaggactgca tgaagagggtg caaggagatc gctgctaagc aggggcctag 240  
ggacccttac aaggataaca aacttgacat cccatgaact agttaatgct cctatatcat 300  
ctgcctatcc atgcatgcat tgcattgcgt atgcacactg tgcgtgcctg cccacaaaagt 360  
tcgacaacac accgatctcg atggatttgt aatcgtgtcc act 403

<210> 2845  
<211> 396  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-D5

<400> 2845  
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ggccgcccct ggaaggagtt ctgcgcctc gtcacatgg agagcaccat cgccgacttc 180  
gtcaagccag aggggtacat gccctggaac ggcgacttcg ccctcaagac gctctactac 240  
gccgagtaca acaaccgcg gcccggcgcc ggcaccagca agagggtcaa ctggcccggc 300  
ttccacgtca tcggacggaa ggaggccgag ccgttcaccg ccgggcccgtt catcgacggc 360  
gccatgtggc tcaagtacac cggcgcgccg cacata 396

<210> 2846  
<211> 388  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-D6

<400> 2846  
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ggggattccg cccctccgac ctatctaagc ggaccataac cacgggcagc aggacattat 180  
attcttctgc ctgcccttcc gttcaatttc aatttcactt tccttctctc ctctcctcct 240

gctgctacta ggttcggggcc gtccgtcctt gctcttgatc tgcattatattt aattcggacc 300  
attccccgc cgtcctccccg cccgcctgcc ggagatggag atggacaacg ggcacgccaa 360  
gtaccgggtg gccgtcattg gcaacggg 388

<210> 2847  
<211> 396  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-023-Q1-E1-D7  
<400> 2847

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caaccaata atggcagaag tcctatcagg atctcatgaa caccgtctaa gctctgcctt 120  
agatggacac tacgacgaga agaggaaatc caatgtggaa tacacagagg acgagaagaa 180  
agccgtgatc gcggtctga aaaagaaggc tttagcgcc tcacagaagt ttaggcattc 240  
catgaagagg gggaggaaga gcagcaaggc gatgtccatc tcgattctgg atgagcgtga 300  
acctgaggag gtgcaggctg tggatgcctt ccgccagctt cttgtacttg aagagctgct 360  
accatcgag catgatgact accacatgat gctaag 396

<210> 2848  
<211> 373  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-023-Q1-E1-D8  
<400> 2848

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tctgcatcgt gcatggtgag aaggaagagt caaaggcat cgatgcgaaa gcgtccgggc 120  
ctggtgggtc cttcgacatc accaagttgg gcgcctccgg caatggcaag acagacagca 180  
cgaaggctgt gcaggaggca tgggcatcgg cgtgcggcgg cactgggaag cagacaatcc 240  
tcatacccaa gggcgacttc cttgtcggac aactcaactt cacaggccct tgcaagggcg 300  
acgtgaccat ccaagtggat ggcaatctgc tggcgaccac ggacctaacg cagtacaagg 360  
accatggtaa ttg 373

<210> 2849  
 <211> 335  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-023-Q1-E1-D9  
  
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 gccccctcct tttccctcc ctcccacacg caccgcccgcg tccgccccct tcgctgcccc 120  
 tgcccggtcg gttccgatgg ggtacgtgct gtcggcggcg gcgaggggtgc tggagcagcc 180  
 cacggcgctgg ggggcggccc gggagatggc gtcctcgcg gggccgctct gggcggcggc 240  
 cctcctcggg ctctgctcg gctgggcctg gcgccgcgc tgggcagctg gactcgtcgc 300  
 cgcccccgcg cccgcagccg ccgcgcaacc gcct 335

<210> 2850  
 <211> 384  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-023-Q1-E1-E1  
  
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 ttcccatccc atggcggggcg gcgacctcac gcctcctcct cctcctcccg aagagacgcc 120  
 gccggcagcg gcggccgagg acctgatcga gatcgtggag gaagggtcgg ggcggctgga 180  
 catcgcgcg tacgtggacc acgtgcgcga cctgtcggcg ggcgccatcg cgacgttcga 240  
 tggcacgacg cgggaccact tcgcggggcg gcgcgtggtg gagctccggt acgatgcgta 300  
 cgcggccatg gcgcggcgcc gcctggctgt catactgctg gaggcccggc cgctgcacgc 360  
 gcagctgctg ctggccgtgg agca 384

<210> 2851  
 <211> 388  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-023-Q1-E1-E11

<400> 2851

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ggaagccgat ccgcggggcac tgccggcaca gtggaccacc gcgaagaagt acaaggccac 180

gatggacgcc aagacgcggc aggctttcga cggcgtgggtg gccgccgcta cggcagagaa 240

gcgggtcccag gcggtggagg ccgctgctgca gcagcagctg aacatggacg tgtccctgtc 300

caaggcgacg tcttccgggg acgagaacaa ctacgtgagc gtggccgccc cctacgagaa 360

ggccgcgggc gccgtcatcg ccgcgacg 388

<210> 2852

<211> 365

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-023-Q1-E1-E12

<400> 2852

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taaaaaggag agagagagag atggctctgt cgtctcgccg tatggccgcc gcaccattct 120

tcgtcgctcg ccttctcgtc ctctgtggcg cagagaggac gatgggcagg gtggtgggtg 180

aagagacgct ctgcttgctg cagagccatg ccttcaaagg cgtgtgcctc agcaacacca 240

actgcgacaa cgtatgcaag acggagaagt tcacaggcgg cgagtgcag atggacggcg 300

tcatgcgcaa gtgctactgc aagaaggtct gctanggcac gaccggcagc aagccccagc 360

cgtac 365

<210> 2853

<211> 439

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-E2

<400> 2853

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atcgggcagg gcacgtacag cagcgtgttc cgggcgcggg agctggccac gggcctgctg 120

gtgtcgctca tcaatgtgca gttecgacatt gtgcacctcc agaacttgca gttcatggag 180  
caggaaagtt gtaaccgccg catcctcagt ggcttgccga agctcgtcga actcgaaggc 240  
atcaatacct cccgtcctc tccctccatc taactcatct tcgaatacct ctagcacgac 300  
ctggtcggcc tcaactcctc atccgatatc atcttcaccg agccccagat caagtgtctac 360  
atgcgacagc tgctggtagg ggctggcgca ctgcaatgca cgcggtgtga tgcaccggga 420  
catcatttgc gccaacctg 439

<210> 2854

<211> 371

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-E4

<400> 2854

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agagggttgc ggcggccaag cagtacatcg agaaacacta caaggagcag atgaagcatc 180  
tgcaggacag gaaagaaaga cgggtgtagtc tagaaaagaa actagcggac gctgatgtgt 240  
ccgaagagga ggtcaacaac atcctgaagc agttcgagaa gaaagagacg gagtacctgc 300  
ggttgcaaag gcacaaaatg agcgtcgagg atttcgagct gctaacaatg atagggaagg 360  
gagcttttgg c 371

<210> 2855

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-E6

<400> 2855

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cgccggcgcc ggcgccggcg ttgacatcaa ggtgtcgtgt gcagcgacgc cggacccgga 180  
cgtgtgcctg cgcgcgctcc aggcggacag cgactccaag accccgcggg acctggcgga 240

ggcggcgctc cgcgcgggcga cgaccgcggg cggcgcgggcg ggcgactacg cgcgggcacga 300  
gatggacgtg gtgaaggaca acgacatgtg gcagtgcctg aacgagtgcg ccgggggagat 360  
cgaggaggcg ctg 373

<210> 2856  
<211> 437  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-023-Q1-E1-E7  
<400> 2856

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tttgttgga ttgcactgag gaagctcatc gaccagtga ctgtgagact gtttctaagt 180  
ggatattaaa aaacagtgcga gaatctgaaa acatgaactg gatactggct aattctaagc 240  
cctgtccaaa gtgcaaacgg ccaatagaga aaaaccaggg atgcatgcat atgacatgca 300  
cccctccttg taaattcgaa ttttgctggg tatgtctggg tgcattggca gatcatggag 360  
agagaacagg tggcttttat gcttgcaatc gttaagaatc aagcanagaa ggaggaattt 420  
tacgacaaga ctgatgc 437

<210> 2857  
<211> 324  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-011-Q1-E1-G10  
<400> 2857

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gctggatcga attgtctcac gttaacaaca tcgggatcac cggctcgggc acgctggacg 120  
gccaggggac cgccgtttat agcaagagca agaccgacaa cgtgaaggcg atgccaaca 180  
cactggtgct gtttcacgtg atcaacgcca ctgtcgccg aatcaaacta ctcaactcca 240  
agttcttcca catcaacatc gacaactcag agagcatcac cgtgaaggac gtgaacgtca 300

ccgcgccccgc cgacgttgag aaca

324

<210> 2858

<211> 406

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-G5

<400> 2858

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cagggagctg tcctattctt gtttctcttc ctgcgcgag cagagggtggg aaccatcgat 180

gccaaaatgg gagtagccat gcccatgcat gccttgataa tggagaaagc gaaacagcag 240

gagacggaga agaaggagga gaaaagcacg gagaaggaag agagtcaatg cttatcgccg 300

agtctccagt tcgagggctt ctgcttcaac agcgacagat gcgcgaggt gtgcatgaag 360

gagagctttc ccggtggcga gtgcaagcgg gacgtggcca tgcgca 406

<210> 2859

<211> 449

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-G6

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cccacagcac ccaagcagac cacagcaacg gctgcaacct ctgctggaac gccgtggtac 300

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tcctggccgg cgccgacaag ggtggcgat 449

<210> 2860

<211> 458  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-G7

<400> 2860

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gaacaacccg tctccctcca tctctctacc ttcttctcct gcgcccctat ccatcgctcg 180  
caccacccac tgaccgggccc gcggcacccct tattaccata acatcacggg acggtggcgc 240  
gatgcaagga ggcccactga gcccgcatga gtactgggtg atatecgccg cggcgctgct 300  
gcaccagccg gcgtccacca tcgtcgtggc catcgaccgg gaccggaaca gccaaactggc 360  
cgtgaagtgg gtggtggacc acctcctctc cggcgccctct catatcgctc tgctccacgt 420  
ggccgtccca ttacacacga cccaatggtt cccatggt 458

<210> 2861  
<211> 425  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-G9

<400> 2861

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atccgtcgcc gtcggggccc tcagcgcggc cgaggcaccg gcagagtcac cgaaggcagg 180  
cagtcctgcc aaggcaccgg ccgagtcacc gaaggcaggc agtcctgcag ctcttgccaa 240  
ggcacccgag tctgctgcca cgagaactgc ccccgctaag gcacctcaag ccgcctccac 300  
ccccgccgct gccgctgctc catcgctgct gtcgtctacg aagtctggtc cagctgccgc 360  
gccgaccacc gccggtctta caccgtcttc ttccacggac gaggagttaa gcccttcgcc 420  
gtcgg 425

<210> 2862  
<211> 384  
<212> DNA



<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-H1

<400> 2862

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aagcgcccggt tcggcaacga cgggttcggc gatggcagca acaacggcag cgcgaccggc 180

gagaagccca aggcgcggcg gcgggaggcg gaccgcggcg cggcgatggc cgcggcgcg 240

cacgagttcg gcgagcacgg cggcgtgaac atgtccatcg aggcgtcggc gacgttcacg 300

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gacatgtaca tctacagccg gcac 384

<210> 2863

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-H11

<400> 2863

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tttttttttt tttttttttt tgatttccag attgccctcc tttcttaaca ctaatttgca 120

ccatttacag aatcagcttt agcttacagg gactaaccaa gtctgaaaaa tatcagttaa 180

tgatgcaaag ccagcatcga tgcatacataa acgatgactg aatgagccat gcgtgtgtgt 240

ttttataagc tgagacgtag taaaatgtag aagatcccat acagcgctgc ctgatcaggg 300

ttgggagctt gcatctgaag tggcagcagg aggcggcgaa ggcttgcttc tttggcggct 360

gaacaagttg tgcttggtgc aagcggcagc gacgatcgac aagccactga accta 415

<210> 2864

<211> 68

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-H12

<400> 2864

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ctagagga 68

<210> 2865  
<211> 435  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
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<400> 2865

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cgccgtggcc tcctttcttcg cgtactacat tctactgagcc gccggacgag gagccggagc 300  
cggagggaag agaccaaggt ggggggagag acttggctgc gctgcgctgc tctgctgctc 360  
ncgcgcattc ccgatgcgtg ggcgtgctct gattgggcac ggcggtggca gtggcacacc 420  
ttcgtcttcc ttttg 435

<210> 2866  
<211> 383  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-H5

<400> 2866

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agctgtaaaa aagatccaag tcaagggttc aaaagggttc gacgttaggg gagtgaatcc 180  
tggaaaaagg tcatcgccat tacagaagaa gccgagtgga ccttcaccga cgtaatacaa 240  
gaagggcgga ggtgaaggaa ggaagactcc aaatggtaaa acaggaacca agaagtaagc 300  
aatccagatg aaacttggtt ttgctgtgac caacttcacc ttgggttaggg acagataaac 360

atgttgatac tatcgggtga tac

383

<210> 2867

<211> 455

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-H7

<400> 2867

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agggtttctg atggccctcg acgccgtcct ttctctctag tgcccagctt tattgcagat 180  
ccagccctct gatectcgtc ttctttcacc tctccaacat gaaggtaaac accaagatca 240  
agctggagcc ggatcatggcg ccgtcgtcgt ccctgccgcy gagcgccagc gagctacccg 300  
accgcccgtc accgttcagc tccaacacgg cgcaccaccc cgtctccgtg cccaccacac 360  
ctaggttgtc cttatcgtgc tcgtcgttcg gccacatggt gaccccgccc accgacacac 420  
cgccgatcac gcccnacaag aagcaggacy acaag 455

<210> 2868

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-H9

<400> 2868

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ccatccgtcg tcgccaaccg tagcaaggag ccaaggacat caccaccgcc cagcaataat 120  
ggcgagagc atgaggattg tggcgctggc cttggtggcc ctgctggtgg tggcggcggc 180  
ggcgcccgtg gccaccgct acggctgcta cgacgactgc tacgagcgct gcgccaacgg 240  
caagaaagac cccgcctgca ccaagatgtg caaccaggcg tgcggctcca cggaccaggg 300  
cgccggtgcc gccggcgccg cgccggcttg atcgcccagc gcattcatcg cttcagctcg 360  
atataatcgc tgctccgtca gcaaccaca tatgattcga tcaatcttcc tcctctaatt 420  
tctccaaccc 430

<210> 2869  
 <211> 323  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-012-Q1-E1-A1

<400> 2869

ccacgcgtcc ggctgaagcg aagcttccgg ttcattcacgt tcangatcaa cgagcagacg 60  
 cagcaggtgg tgggtggaaag gctggggaag ccggcgaaaa ctaagacgac ttcaacggct 120  
 ccatgcccga gagegagtg cgtacgccg tcttcgactt cgacttcacc accgacgaga 180  
 actgccagaa gagcaagatc ttgttcattt cctgggtcncg ggacacctcg agggtcagga 240  
 gcaagatgct gtacgcgagc tccaaggacc ggttcaagag ggagctggag ggcattccagc 300  
 tggagctgca ggccaacgac ccc 323

<210> 2870  
 <211> 373  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A10

<400> 2870

cacgcgtccg aggacgtaag aagtcgtcta attcttggat cgaattagac gacttcttcg 60  
 tcactctctt cattaacacg ctaagatgtg atctgcagga tatacacaca gacgtgattt 120  
 aggtagcgac tgattggcag gccacttgaa agttcgcgtg gtccggagta tcaaccttgc 180  
 ctaccgcgac gcaagaggca acgatccgta tgtcgtccta cagcttggca agaggaaact 240  
 gaagagaaac gtgaagaaca gatgcgtgaa ccccatatgt caacgggtac atagtctgag 300  
 cgtcagagat gccagcctac cactgaatct ggacgtgttc gacaaagaca ccttcagcag 360  
 agatgacccc atg 373

<210> 2871  
 <211> 457  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-012-Q1-E1-A12

<400> 2871

taccggtctc acgttcnccg gccgccccac gcgtccgaga acacggacga gaaggacgtc 60  
acggacatca acgtcaacga ttgcactctt aagaagacga tgttcggcgt ccgcatcaag 120  
gcgtacgagg acgccgcctc cgtgctcacc gtctccaaga tccactacga gaatatcaag 180  
atggaggact cagccaaccc catcttcacg gacatgaagt actgccccaa caagttgtgt 240  
actgccaacg gcgcctccaa ggtcaccgtc aaggacgtca ccttcaagaa catcaccggc 300  
acctcctcca ccccgagggc cgtagcctg ctctgcactg ccaagggtcc atgcaccggc 360  
gtcaccatgg atgacgtcaa cgtcgagtat agcggcacca acaacaagac catgggtata 420  
tgcacgaacg ccaagggcaa gcacaaaggt tgcctca 457

<210> 2872  
<211> 442  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A2

<400> 2872

ccacgcgtcc ggtgatgctg tggctactca aggacaagct aagcgagatg gaccacgacg 60  
gagacggcag gctaagcctg gaggagtctg tcgccaatc tcacatcacc atctccggcg 120  
cgcgtcacga cgacgacggt ggccatgcc atgacctga gcgtgccgaa gctgccaaga 180  
agttcacgga actggacgcc gacaaggaca actacttgac ggtggaagaa gcgcgctgcg 240  
tactgcagag cctcgttacg ggggagttct cctatgctac ctcacatgcc aagttcttga 300  
tgaaggctga tgtgaacct gacggcaaac tgctgctgga ggagatgcta gacgactaca 360  
tacccttcta cagcaccgtg tatatggatg atcattacgc cagtgaaggt gaagtagata 420  
gtgattcccg cgacgagcta tg 442

<210> 2873  
<211> 456  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A4

<400> 2873

gggtcgaccc acgcgtccaa ccatagcttg ctctcgatc catcaattgc aagaggagca 60  
agataccacc accgtagcac cacacgcagg tacgaagaag gcgacgaaca tggcaaggct 120  
ggccttggtg gcgggcgttg ttctgtgcct cctgttagcg acagggccgc agggggccat 180  
cagcgccgag gggatggtgt catttgacaa tttgatcagc tgcaaggtag tgggcaactg 240  
cgacaagaac ctgggccccg aggcctcccg cccagggaaa cccgccaacg actacaccg 300  
cggctgcaac ccgatcaccg gctgtcgcgg ctgatcatat ctctctggtc gatgtgcgcg 360  
caatgtcaat gtcgcacgcg cgtgcaaggc acaggcctca tcgtgtggtg ccgcgtgtgt 420  
gtatatatta cacacatgca ttatacattg gtcgtc 456

<210> 2874

<211> 455

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A6

<400> 2874

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tggcctccag gtcctccatc ctacttgcaa cgtcgatgct ggctgcgctg tttgcggttg 120  
gtttgtgcac cccccgctc accttccagg ttggcaaggg atccaagcct ggccacctga 180  
tcctcacccc caatgttgca accatatccg acgtggagat caaagagcac gggggcgatg 240  
acttctcctt tacgtcaag gagggcccga ccggcacctg gacgctcgac accaaagccc 300  
cgctcaagta ccccttttgc atccgctttg ctgtcaagtc cgggtgggcta cgcacgctg 360  
acgacgtcat ccccgctgat ttcaaggccg gcaccaccta taagaccaca ctcagcatct 420  
aatcagcctc tgatgatgaa ttaaatttca aaaga 455

<210> 2875

<211> 330

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A7

<400> 2875

gacccacgca tccgaaagca gataagaata aatacctcgc taataaaaag ggggggcat 60  
ctcttcgatac gatcctgggt tacgtatgca tgcagcgtag ttcgctcgtc atcgtatgca 120  
ctaacgtgca tttcattcgc cgtcgttcga gatcctacgt cgtgcaagag atatgcagg 180  
cgtagctaa atcgatctcc tacaaggaga tcttccttta gctggctgaa gtgctagcgg 240  
tgacgcacac ataggtcttc ctaggaatta gttagccaga ctgaatggtg aaaggcacgt 300  
tgctgtgtg cattcattat gctgggaggt 330

<210> 2876  
<211> 453  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-012-Q1-E1-B10  
<400> 2876

taccggtctg aggttcccgg gtggcccccac gcgtccgaca ggaggaagtg gcaacgtcta 60  
tactggaacc ggtgccgatg caggcgtttc tggaggagga tccggtggcg ccgacggtgg 120  
tattggagct aacataggtg ctggtgtctt cggaggcgtc aaatttggtg gcggcgccgg 180  
aggaagtgtg ngaggaagtg gcagtgtgct tgcaggtgct tctggaggga gtaaatactc 240  
gggggggtggc tcagatcttg gatatggttc agcagcaag gagttataga ggatgatgac 300  
cactcaccac cgtagatcg atatgattcg tcccaaggaa tttattcctg ccctttttgt 360  
tatcgctgtg tggtttatta ccacgcacca gtcaatagtg tggaggcaat atacattgat 420  
tccccctgac tggacaatac aaagataacc tta 453

<210> 2877  
<211> 443  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-012-Q1-E1-B11  
<400> 2877

gggccgcccc acgcgtccga gaacgcgtgg gacagccgag cgatctcttc tccctctccc 60  
tctccgatcc attctccagc gcagcgaagt aaacatgtct gaccgggcaa agatgtcgtg 120

gcagggcgtag gtggacgagc acctgatgtg cgagatcgag ggccaccacc tcgcggcggc 180  
ggccatcgtc ggccacgacg gtgccgcctg ggcgagagc acggcggtcc ccgagttcaa 240  
gaccgaggac atggccaaca tcatgaagga ctctgacgag ccagggcacc tcgcgcccac 300  
aggcctgttc ctccgaccta ccaagtacat ggcatccaa ggcgagcctg gtgccgtcat 360  
ccgtggcaag aagggatcag gaggcacac cgtgaagaag acagggcacg cactcgtggt 420  
tggcatctac gacgagccga tga 443

<210> 2878  
<211> 401  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-B2

<400> 2878  
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ggtaatagca tcattgggcat ggccgcccgc catgatgagc tcctcgcccg cggttcttgc 120  
gggcccccta acgtgcgact cggcccgcacc atcaccagta actacaaggg caagtggcac 180  
aacgatatgg acacgtgatt cggtcagcgc aacgggtgacg tggcaccgga aaacgaacgt 240  
tcgtgcggca tcagaaacgt gaagttgcta ccctataacg gcattacagc ttgcagcata 300  
gtcccgatct tcagcggtccg gaaagggtgc cagccatgct gccaggtgag atgcaaggtc 360  
atgcctgaat gttcgatcaa tcgagtcacc gtgttgatca g 401

<210> 2879  
<211> 444  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-012-Q1-E1-B4

<400> 2879  
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tccttgtagc agggcctgta cggccgcagc gtggcggacg cccgcacccg ccccgcgctc 120  
cgctgctga agcagaacct gtcgttcctg gtgtccgtgc tcgcggaccg cgcgcagccc 180  
gtggcgggtgc gggaggtgat gcgcgcctcc ttcgaggcgt tcctgatggt gtcctggcg 240



ggcggcaacg agcggagctt cgtgcgcgcc gaccacgcca cggaggagga ggacttccgg 300  
 agcctgaggc gcgccttctc cacgtgcggg gaagggctgg tcnccgagga cgtggtggcg 360  
 cgggaggcag agacggccga ggccgtcgtg gagctcatgg cacgctccac ggactacctc 420  
 atcgacgcgt tcagcgtcgc cacg 444

<210> 2880  
 <211> 449  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-B6

<400> 2880

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 cgaacagcta tagggcgagg cgatggacgg ccaacgacga cagcaatggc cgaggtctcg 120  
 ctcgggggct gccgcgcgc ctctctcct cctgctgctc ctgtcgggtg ccttgggggg 180  
 gcatggtgat cacggcgcg cggtgcggg cgtcgccct gcagccggca acggcatgac 240  
 ggagctgcag aagcacgtgg cgttcttcga ccgcaaccac gacggcatca tcaccttcga 300  
 cgagacctat caatgtctgc gggacgtcgg agtcggcgat gtcacggcca aagccagcgc 360  
 cgcgttcata aacggcgccc tcggcccaa gaccagacct gacaattcca actcctcaag 420  
 cacggatatc tacgtagaga acattcaga 449

<210> 2881  
 <211> 450  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-B8

<400> 2881

attcgcggtt cgaccacgc gtccaatcca tccgagctaa gtaattaggt cgaaaatgac 60  
 ccgtgccagc agcagtagca gcagccggcg tgtgacgctg gtactgctcg gtctccgcct 120  
 gctgcttctg gttggtgttg cgcaggcggt agtggagttg gtgcctgctg atgataatat 180  
 cgccgccgcc gctgctggca cggcggtgga cgatggcgag ccgcctcagc agtgcgcgac 240  
 cccggtgagc gtggaggagg cgtgccgcgg cgcgtccgag acgcacgccg gctgggccta 300

cgaccactgc atggcgctgc tgggcgccga cccgcgcagc aaggaggccg gcaacaagaa 360  
catgcacggg ctggcgggtgc tggccaacag gatggccatc gaccacgccg ccagcaccga 420  
gtccaagatc gacgacctcg cggagctgga 450

<210> 2882  
<211> 440  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-B9

<400> 2882

gggccgcccc acgcgtccga gaccagccca ccttcacgct caacttctcc aaaggttcca 60  
gccagattat cgcgcagtat taccagctca tccgcctcgg attcgagggc tacaaggacg 120  
tgatgcagaa ctgccgcgac aacgcggcgg tgctccgcga gggcatcaac aagatgggct 180  
acttcgacgt ggtgtccaag gactcgggcg tgccgctggg cgccttctcc ctcaaggact 240  
cctccaagta cacggtgttc gaggtggccg agagcctgcg ccggttcggc tggatcgtgc 300  
cggcctacac catgcccgcc gacgcggagc acgtggccgt catgcgcgtg gtcacccgcg 360  
aggacttcag ccgcgggctc gccgagcgcc tcatcgcgga cctgggcaag accatggccg 420  
acatggacgc gcacgccggc 440

<210> 2883  
<211> 428  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-C1

<400> 2883

acgcgtccga ggcactggcc gtcgtccgcc ggtagctcgt ggtcgctcgc tcgctccatc 60  
attcctccct ctccgccggc gtgcccggcc gccacatga cggagtcaga gggcgagacg 120  
gaggctgcgc gcgcggccgt gctgacgccg ccgctgtcgc tggggggcgg cgggctcgcg 180  
ggggagctcc gcccgccaa cctcggccaa cgggtgtcga gcctcttccg caacgtccgc 240  
ccgggctccg acctctccca ctccagctg ccggcgacgt tcaacctgcc caagtcgcag 300  
ctgcagctgt acggcgaggc cgtgtactgc ggccggcagg acatgctggc gcggtgcgcg 360

cgcgggcgccg acagcctgca ggcgatgtgc gccgtggtgg cctggagcat ctccacaagc 420  
gggcccccc 428

<210> 2884  
<211> 460  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-012-Q1-E1-C11

<400> 2884

accggtccgn aaggttcccc ggccgccccca cgcgtccgac atcgaccacc tcaacgagct 60  
tctgctccga cgacgacgac gtgccgccac atccacatgg cggacgacgc cgtcgccggc 120  
ggagcgcccg ttcgctgccc agggccggcg ccggcctcgc tgtcttctag caggaagcag 180  
cagcagcagc ccgacgacgc cggctgcccgc agcagcagc accactacca gcacgacgtg 240  
atcatgctga ggcggacgag gagcggggcg gcgttccccgc cgccgatctc cgtgatccgc 300  
aagggcgggc ggccgtggct ctgcctgccc gcgcaccgag aggggtggacg cctcgtgctg 360  
cggcagatgc gcctgccgtc gcaggagctg ctgcagccct gcaaggagga cggcaggttc 420  
aagctcctca tgcactcgga ggcccgcgag cggccgtgag 460

<210> 2885  
<211> 448  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-012-Q1-E1-C2

<400> 2885

cgggtcgacc cacgcgtccg agatattcat gtcactgctt gctggtgctc tgtttgggca 60  
gctccggggc gtggccctgg tagtcttcgc cgccactgct ggcgcttctt cgtgctatct 120  
cctgtcgaag atgattggga agccactggt gttcacgctg tggccagata aactcagctt 180  
cttcagaga caggttgcta aaagaagaga gaagctcttg aattacatgc ttttctcag 240  
ggtgaccca acattgcaa ataccttcat caacttggct tcaccgatag tagatgtcnc 300  
ctaccacata ttcttactgg gaactctcat tggccttctc ccagcttctt atgtgactgt 360

canggctgga atcgctcttg gagaataaac tcgctaagcg acctttacga caccagtcg 420  
 atagcgctgc tattcctgat cgggtgtg 448

<210> 2886  
 <211> 446  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-C5

<400> 2886

ccacgcatcc aatgacttct gcaaacagct tgagcttgcc aggacgttcc agtttcctac 60  
 tctcaggcag ccacccgcat cgtttcttgc aacgatggaa gagtacatca gagaagcacc 120  
 ccgaccctcg atcaagagtg aggagagcga ggagccgaag ctactgacct acgagcaaga 180  
 agctccagag gaacccgaaa atgctgtgga agaggagaaa gaagaaccga gtcaaaaacc 240  
 agaacctcag cctgtgcctg atccagaacc ccacccacag caaacgactg gagatctact 300  
 aaacctggaa gcagaggtga atccttcggc tctggaactc gaacaaagca atgcattggc 360  
 actcgcta at gtagcaccag gtgactacaa gccgccagca tctcaaagta tgtttgatgt 420  
 caattcgtct ggggtgggagc tggcac 446

<210> 2887  
 <211> 459  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-C6

<400> 2887

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 gccgtcggca cctccgcttc aagatgcaga tctttgtgaa aaccctgact ggcaagacta 120  
 tcaccctcga ggtggagtcg tctgacacca ttgacaacgt taaggccaag atccaggaca 180  
 aggagggcat cccccagac cagcagcggc tcatcttcgc tggcaaacag cttgaggacg 240  
 ggcgcacgct tgctgactac aacatccaga aggagagcaa cctccaactt gtgctccgcc 300  
 tcaagggagg catgcagatc ttcgtgaaga ccctgaccgg caagactatc accctcgagg 360  
 tggagtctc cgacaccatt gacaacgtca aggccaagat ccaggacaag gagggcatcc 420

ctccagacca gcagcggctc atctttgctg ggaagcagc

459

<210> 2888

<211> 447

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-012-Q1-E1-C7

<400> 2888

cccacgcgac cgaccacgcg tccgcaaaca tgagaggagc agaggaggag agatctggcg 60

ccgccactga tgcgggagga gaggaggaga aacgggagag gagcgtcggc ctgatggccg 120

gcctcatgga caaggccaag ggcttcgtgg tggagaaggt gacgcaaata cccaagcccc 180

aggctgcgct ggatcacgtc tccttcaga gcatcagccg cgaggcgctc gagctgcata 240

gccacgtcga catcagcaac ccctactcgc accgcatccc catctgcgag atcacctaca 300

cgttcaagag cgccggcaag gtgatagcgt cgggcacgat gcccgaaccc ggggtggatcg 360

cggcgagcgg cagcacaagg ctagacctgc cggatgaaggt gccgtacgac ttcacgtgtg 420

cgctgatgaa ggatctcgga ngggact 447

<210> 2889

<211> 461

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-C8

<400> 2889

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tcggccggcc gctcgtccgc tcgtctccc ccgcaagaat ctccaggtga tggcggcgcg 120

ccgtgccac tgacgtccgc agcggtgccg gcggcgagcg cgcgatccgc ggcgatggcc 180

gccgaggcca gcatggagcg cgcgcgcgac ggccggcgcc acgagcacca gcagaagcag 240

cagcggcgca gccaccggcg gtcggcttcg gcgtccgtga cctcgtccac gaaggaattg 300

gcaacaaggt ccgggtccgc cttcggcttc agcgtctcgg tcccaggcgg cggcggcgcg 360

ggcgcaggag tcggagcggc ggctgcggcg gtccccgccc gtggaggcgc ggcgggagcg 420

cgagcggcgt cgggcgcgcg agcagccgcg gtgcggggag g

461

<210> 2890  
<211> 423  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-D10

<400> 2890

acgcgtccga taccctcgtc gtcgtctcac tcaccccgcc ttcacgcctc cctcaccaaa 60  
taaggtcccg ccccttttcg acattcacag gggggacagg aaatcagcgg ccatggcctc 120  
gattccggcg acgaccttcg ccgtcatctt atccgtcctc ttctgtgccg cggctggcac 180  
cgccgtcgac aacgacctcc ccgactacgt catccagggc cgcgtctatt gcgacacctg 240  
ccgcgccggg ttcgtgacca atgtcaccga gtacatcgcg ggcgccaaagg tgaggctgga 300  
gtgcaagcac ttcggcaccg gcaagctcga gcgtccatc gacgggggtga ccgacgggaa 360  
cggcacgtac acgatcgagc tcaaggacag ccacgaggag gacatctgcg aggtggtctt 420  
ggt 423

<210> 2891  
<211> 459  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-D11

<400> 2891

taccggtctg atgttcccg gcccaccac gcgtccgaca acgcgtccgg ccatcttctt 60  
cttcttcccc gaccttctcc cctaaggcct caaccaagca aaggtttgat ttacataacc 120  
agagtaacgg acccagcgcc agctggaaca acgaccagag actccggcat ccagtcgacc 180  
aacgtacaat gcgtttcatc caaggaagga cctccaagca gacgagcagg gttaagaccc 240  
ttctatggct tgccttgctc cgccttgccg ctgcccgcgcg tccccgcctc gctcgcaagt 300  
cgatttcccg cagcgatggt ggacagctac tagcactcgg acacattgat cgtgctctcc 360  
accgtgcaga gcagctcata gaggaggaca acatgctgga ggcgttcaac ataatagagc 420  
tacactgcaa tcgcctcatt gagtgcgcaa agcagctag 459

<210> 2892  
 <211> 452  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-012-Q1-E1-D12  
  
 <400> 2892  
  
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 cgggcgcgtg ctgctgctcg ccgtcggcct cctccgcccc tgctggtggt gtgcgcggca 180  
 acgaagaggc gtcgacgtcg gcgctggctt ccgcgccaga tggcaagaaa aagaagaggt 240  
 ggaggaagag aaagttctgg agaaagaaga agaaggccaa gaaggagagc gacgatggca 300  
 gcggcgagct cgtggatctc gtcaacagct tctcggccaa gtccgacgtg tgcaagaacg 360  
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<210> 2893  
 <211> 442  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-012-Q1-E1-D3  
  
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 tatgattctg cagttgatat gtgggcaatg ggtgccataa tggctgagct gttgacactc 180  
 catcctctct ttcttggaaac cagtgaacca gatgagattc acaagatatg caatgtcatc 240  
 ggtagtccag atgagcaatc ttggcctcaa ggattgtctc ttgcagaagc aatgaagtat 300  
 cagttccac agaccaaagg cagtcaattg tctgaggtga tgacaacagc tagtagcgag 360  
 gcaattgacc tcatctcatc actatgtca tgggatccta gcangagacc aaaggccaca 420  
 gaagtcctcc agcatacctt ct 442

<210> 2894  
<211> 449  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-012-Q1-E1-D4

<400> 2894

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acgacgacgc gccgccacag ccacatggcg gacgagccg tcgccgccgg agcggccggtt 120  
tgctgcgacg ggccggcctc gctgtcttct agcaggaagc agcagcagca gcccgacgac 180  
gccggctgcy gcagcagcag cagcgacgac cactaccagc acgacgtgat catgctgagg 240  
cggacgagga gggggcgggc attcccgccg ccgatctccg tgatcggcaa gggcgggcgg 300  
ccgtggctct gcctgcgggc gcaccgcgag ggtggacgcc tcgtgctgcy gcagatgcgc 360  
ctgccgtcgc aggagctgct gcagccctgc naagaggacg gcaggttcaa gtcctcatg 420  
caccgggagg cccgcgcgcy gccgtgcgg 449

<210> 2895  
<211> 453  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-D7

<400> 2895

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tttctctgct caatataaga ctgagggcac ttgaagatga ccaggagttt ctcaagcagg 180  
tgttgagttc cctccaatgc ggtagtgatg gactgcagtg tatacaggag ataagcggcc 240  
atctagcaga gttgcgaata gttgtgactc gctaaggaaa atgggtttgc cccgagtcca 300  
aattgttagg tcatcatgag gtcttctcat gcagcagact aactaagggtg cttccactga 360  
gtgcccacaa tccaatcta tctgaagatg gatgccgttg caggaaatac ccattgtctt 420  
cgcttctgat cgggctcaac agcagaccaa aat 453

<210> 2896



<211> 423  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-012-Q1-E1-D8  
  
 <400> 2896  
  
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 aggctgagta cgacgagtct ggcccgtcca tcgtgcacag gaaatgcttc taattctttg 180  
 ggcccaagag atgcaaagcc gagaggagcc attatcgcca gcctcccgcc ccgtttcttt 240  
 ctcccttttg tgctgtttct tcattagcat gaacaaagtt ttctgccggg ctgtcggcag 300  
 ccgctttctc ctattcatca agactgtaat gtctattggt gctacctaata gcttctcact 360  
 tgtcattttg gacacatggt cgacctattc aattttaatg agatgcctga tgaggctact 420  
 tgc 423

<210> 2897  
 <211> 433  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-012-Q1-E1-D9  
  
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 acgtccatga ggaagcttat aatcgcagtg atcctttgca tcatattcat gacggtggaa 180  
 gtggtcgggg gcatcaaagc aaacagtctt gccatcttaa ctgatgcggc gcaccttctt 240  
 tctgatgtgg cagcatttgc catatcgtaa ttctctctct gggctgctgg atgggaagca 300  
 acaccgcagc agtcatatgg gttcttccgg attgagattc ttggtgcctt ggtctccatt 360  
 cagctcatat ggctacttgc tggcatactg gtatatgagg ctattgtaag gctcattaac 420  
 gagagtggcg atg 433

<210> 2898  
 <211> 449  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E1

<400> 2898

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acaccacaca cacacacaca gaggagagaa gataagagaa cgaggggcag ggcagccagc 120

gccgctagct gaagcaaggc agggcaagag aatccgtacg tcgaggtgca ggtcgtaggt 180

aggatggacg cggaccagca gggcgtggtt gcggcgccgg tgaagccggc gctggccaag 240

gggacgccgt cggcgtcgtt cgggctccgc aacgggagcc tgaacgcggt gcgcctccgc 300

cgcggtgttcg acctgttcga ccgcaacggg gacggcgaga tcaccgtgga cgagctggcg 360

caggcgctgg atgcgctggg cctggacgcc gaccgcgccg ggctgtccgc caccgtcggc 420

gcctacgtgc ccgacggcgc cgcgggcct 449

<210> 2899

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E10

<400> 2899

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caggtgcgtg agcgaagacc tcgaggttcc gcatggagcg ctctttgtga aagattctca 120

acagtgtaca catgaacata gtcggacaaa gggaaagaag aaatgaacag aagttccagg 180

accagcgtga agcaggggtg gagttctctt acgtgtatct tcctttcact ttgtagttcc 240

agtagtttaa aattcactta acgttttgat cattgaatgc cacatataat gccacaccag 300

acgcgccggg attcgatgac caaacgtcaa cgaagtacat cgcgggcgcc aaggtgaggg 360

tggagtgcaa gcacttccga accggcaaac tcaagcgcgc aatctacggg gtcacc 416

<210> 2900

<211> 443

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-012-Q1-E1-E11

<400> 2900

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acccggagag caacggcacc tggaagtcc caggcatcgg cgccttcag tgcaacgaca 120  
ggtacatgcg tagccgctg aaggcggcag cggaggcggc cggcaagcct gaggggggcc 180  
acggtggggc gaccgacgct ggcggctaca acaactggcc ggaggacacc gtcttcttcc 240  
gcggcgacaa cgggtgggtgg agcaccgagt acggcgactt cttcctgtcg tggtagctgc 300  
agatgctgct ggagcacggc gaccgcatcc tgtcggggcg cacgtccgtg ttcggcgagg 360  
cgcccggtga ggtctccgtg aagggtggccg gcatccactg gcactacggc agccgggtccc 420  
acgcncccga gctcaccgag ggg 443

<210> 2901

<211> 96

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E2

<400> 2901

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gcggcgacaa cgactacttg cgccacatc gacatg 96

<210> 2902

<211> 463

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E6

<400> 2902

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cggcaacaag atcagcgtgg ccttgctgag cgtggcccta gtgggcctgc tcctctgcca 120  
cctcgccacc accgcctccg ccaccagaa agacatccac gtcctcggca gcgtcgacgg 180  
ctccagcgac ggcagcagcc ccgagtcga aggccgcgtc gtctacggg acatgaagct 240  
ggctgatacg gaatccgatg cgccggcgcc ggcggcggcg ccggggccgt cgtccggttg 300  
aactgagaag cgtgcgtcca gccaaagca gttgtcaaaa ccgagaacta attaagggtc 360

cgattgtgtg tccggctact actgttcttg ccataattat atatagatac gcaaagtgtg 420  
 gccaaagccta cccacatgca tgctattgca tgcctccgaa tat 463

<210> 2903  
 <211> 421  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E7

<400> 2903

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 agaaggccgg catcgtgccc atctcctatc gcagggtggc atgcgcaaag cagggcggca 180  
 tccggtacac catcaccggg aacaagtact tcaacatggg gacgatcacc aacgtgggcg 240  
 gcgccggcga catcgcgggc gtgtcgggtga aggggagcaa gcgcgtcaag tggacggaga 300  
 tgaagcgcaa ctggggggcaa gtgtggcaga ccgaggagga cctcacctgc gagtcgctga 360  
 cgttccgggt gatgactagc gaccaaccgc aaggcacctc atggcacgtt ctccccgctg 420  
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<210> 2904  
 <211> 458  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E8

<400> 2904

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 ggccgcaaag agatacagca acggcaagaa ttttctccgc agcgcgggcg tgtgctgttg 120  
 ttcgccgtcc gcctccgcc agcttgggtg tgtgcgcggc aaggaagaga catcgacgtc 180  
 ggcgccagct ttcgcgccgg atagcaacaa gaaaagggtg aggaagagga ggttctggag 240  
 aaagaagatg aaggccagga aggagatcgg cgggctgggtg gacctcgtca acgatatttc 300  
 ggccaagtca gaggagagcc taggggttag caaccaaacc atgccagca gggcgctgac 360  
 gttcagtcag ctgagcgccg caacggacgg gttcagttcg cagaacctgc tcggagaagg 420

cggcctttgga cgggtgtaca aagggtcct cgaggaca

458

<210> 2905

<211> 355

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A1

<400> 2905

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cccgcccttt tccgacattc acagggggga caggaaatca gcggccatgg cctcgattcc 120

ggcgacgacc ttgcgcgtca tcttatccgt cctctttctgt gccgcggctg gcaccgccgt 180

cgacaacgac ctccccgact acgtcatcca gggccgcgtc tattgcgaca cctgccgcgc 240

cgggttcgtg accaatgtca ccgagtacat cgcgggcgcc aagggtgaggc tggagtgcaa 300

gcacttcggc accggcaagc tcgagcgtc catcgacggg gtgaccgacc ggaac 355

<210> 2906

<211> 465

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A10

<400> 2906

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agcaaggcgt cggagccggg gatctcctgc tgctcgggtg tggccggagt cgtgcagacc 180

gacccccgt gcctctgcat ggtactggac ggcactgcca cgtccttcgg catcgccatc 240

aaccagacca gggcgtgga gctccccggc gtctgcaagg tcaaggcgcc gccgctcagc 300

cagtgcacag gcgtccctgc ggcacctgca ccgacgcctc ccgacgagcc agcagcggca 360

gctgaggaag aagccgacgc agctgcagat gcccttcag caaatggagc ctcaagctcc 420

acaaactcaa agaatgcagc gagcttactg cttctcatct gcgca 465

<210> 2907

<211> 430

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-001-Q1-E1-A11  
  
 <400> 2907  
  
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 cgcggcagga ggggctcagt acctcccgcc aaagaggctc tggattccgg gcgaggcgga 180  
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 ccaacggcaa cgtcccagga gggcccttcg gtcgtcgttg actcatccag atccagtcgc 300  
 acccgcccaa tcgccatcgt ttcattgacac atcgaccaga tagtttagcaa ttcccatctc 360  
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 gcatcgaaaa 430

<210> 2908  
 <211> 450  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-001-Q1-E1-A2  
  
 <400> 2908  
  
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 aaggccaaca ccgcctacac cgccaaataa ttaacttttag tgctgacaat actttaagcc 180  
 ggcctatgct agctatacta gaattgggtg gatcccaagc aatgcattac acatgcatgc 240  
 attggaccgt gatattctatt tgctaccact accctattac gacagtgatg ctggcgccaa 300  
 caatgatggg gtcacccctc ttctccatct tcttcatctc catatatagc tagagtgaga 360  
 cttctctgtt gtttaaaaga gaaaagttaa gaaatggatt gacaagttat ataataagtg 420  
 cctaataaaa tatttgatag gccttcattt 450

<210> 2909  
 <211> 368  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A3

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gatcatgctg cagctcgccg tccaggactt cgactcgtgc gaccgcccct tcaccaggc 180  
cggcgctcccc aaccccatgg ggaagtttga caaggagctc aaccagatgg ccagcaactg 240  
catggctctt gcaaacatga tatgaaccac gcatgcaacc ccagcgtgag gtgccatcgc 300  
atgcaaggaa tgcttgcatc caattttcaa ttaattaaga attcattgaa attatgagtt 360  
atataaaa 368

<210> 2910

<211> 459

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A5

<400> 2910

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ccctcacaca aataataagg aaaggtcccg cccttttctt ccgacatcca caggggggag 120  
gggaaaacac gtgcattcac ccggcggaac taatggcctc ggttccggct ccggcgacga 180  
cgaccgcccgc cgtaatccta tgcctatgcg tcgtcctctc ctgtgccgcg gctgacgacc 240  
ccaacctccc cgactacgtc atccagggcc gcgtgtactg cgacacctgc cgcgccgggt 300  
tcgtgaccaa cgtcaccgag tacatcgcgg gcgccaaggt gaggctggag tgcaggcact 360  
tcggcaccgg caagctcgag cgcgccatcg acgggggtcac cgacgcgacc ggcacctaca 420  
cgatcgagct caaggacagc cacgaggagg acatctgcc 459

<210> 2911

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A6

<400> 2911

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 tggcctcggt tccggctcgc gcgacgacga ccgcgcgcgt aatcctatgc ctatgcgtcg 180  
 tcctctctcg tgccgcggct gacgacccca acctccccga ctacgtcatc cagggccgcg 240  
 tgtactgcca cacctgccgc gccgggttcg tgaccaacgt caccgagtag atcgcgggcg 300  
 ccaaggtgag gctggagtag aggcacttcg gcaccggcaa gctcgagcgc gccatcgacg 360  
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 tctgccaggt ggtg 434

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 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-001-Q1-E1-A7  
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 ctcccccttc ctccccgtcc ccaccacat gccctgcctc cggcccgccc cgcctgccc 180  
 aagctgagtt cccccacccc caacaaacaa ttactagagt agctgcattg gcggggaaat 240  
 taaagcgcta gaagctcagc agcaatggcg gagcaggcgg gcgtcggaag gtactggtag 300  
 cacatgtgcg ccgcgcccggt tagccccgcg gagggcgagg tggagatgaa gtgcccgttc 360  
 tgccacagcg gcttctctga ggagatggag accgcccgcg gggccgcgac cgacgacggt 420  
 gac 423

<210> 2913  
 <211> 428  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-001-Q1-E1-A8  
 <400> 2913

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 cctactcacc cagagggaac atcttgcaaca tagccaattt caaggacgac tcgagccagt 240  
 cagcttggga ttgctccgca tggattcgcg cctatggatg ctctctggag gaacggctcg 300  
 agtgccctcag ggttctcaga tacgacatcg aaaccgaacg tctcgtcaga tatccccaga 360  
 ctccagcaa ggtacatagt aaaaccagga cctgcctag cccggaactc ttggagcagt 420  
 tgccctgca 428

<210> 2914  
 <211> 425  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A9

<400> 2914

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 aagatctgcg tggacagcct cgccgccaag ccggagagcc agaaggcgac gccgcgcaag 240  
 ctggcggagc tgttcgtgaa catcgcgccg gagaaggggt ccgggatggc caccttcgtg 300  
 caccgcaagt acagcgacaa ggaggacagc gacatgttca ggtgctacga cagctgctcc 360  
 gacgacgtgg aggaggccgt cgccacctc aacggcctcg tccgggagcc caccgacgcc 420  
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<210> 2915  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B1

<400> 2915

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gccgacgcgc ctgaggcggc ggctgacgcg cccgctcccc gtcccgactc cgctcatcc 180  
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 cagttcttgt catgatctat ctagcaaata aaaagatcat atgtctcgtt tgattctctg 300  
 gaataactaa tagtatatat gctgcgcccc gatgatatat aaatatgtgc atgaaatgcg 360  
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<210> 2916  
 <211> 459  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B10

<400> 2916

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 ttcccgccg tcggcgccgt gctgggcgcc tccgtgctct ctttcttcgc ctactacctg 360  
 cagtaaaatt aaaggaggat cggagggaga ggctgctggc tgccattgcc tgtattcgg 420  
 tggattccgt ttatatatat atttaagtac ttttaattg 459

<210> 2917  
 <211> 417  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B12

<400> 2917

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 ccgtcggcgc cgtgctgggc gcctccgtgc tctcttctt cgctactac ctgcagtaaa 180

attaaaggag ggtcggaggg agatgctgct ggctgccatt gcctgtattc ggttggattc 240  
 cgtttatata tatatttaag tactttaatt tgggtctgaa catgtcgatt gatccattca 300  
 ttttatttgc ttigccattt ctcccccttc tgttaatttc gatatgtaaa gaggggagaa 360  
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<210> 2918  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-001-Q1-E1-B2

<400> 2918

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 ggttgggtgtt gcgcaggcgg tagtggagtt ggtgcctgct gatgataata tcgccgccgc 180  
 cgctgctggc acggcgggtgg acgatggcga gccgcctcag cagtgcgcga ccccggtgag 240  
 cgtggaggag gcgtgccgcg gcgcgtccga gacgcacgcc ggcgtggcct acgaccactg 300  
 catggcgctc ctgggcgccg acccgcgag caaggaggcc ggcaacanga acatgcacgg 360  
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 cgac 424

<210> 2919  
 <211> 440  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-001-Q1-E1-B3

<400> 2919

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 ggggtgcggc cccaactacc tggcactgct ggtcaagtac gtcgacggcg acggtgacat 180  
 tgtggcagtg gacgtcaagg agaagggtc cgacacatac gagccccctga agcactcctg 240

gggcgccatc tggaggaagg acagcgacaa accgcttaag ggacccctca ccgtccgcct 300  
 cactaccgan ggaagcacca agtccgtcta cgacgatgtc atccctgccca actggaaagg 360  
 caacaacgcc tacaacgcc aataattaac tttagtgtg acaatacttt aagccgacct 420  
 atgctagcta tactagattg 440

<210> 2920  
 <211> 451  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B5

<400> 2920

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 ggcggtagag cagagacact ccacgggcct caaccagctc gccaccacct cctcctccga 180  
 ctttctaggc agcaaggact agcatgcagt ccgagctcac cgaggaggcc cgcaaaggctc 240  
 gcaagatata cgtagctaca gtcttctccg gcgactagcc caccatctct agcgccgctg 300  
 atgcggtga tctcgctggt ctccggagac cgacggcgctc cagcggtggc cggaggagtc 360  
 ctgtgttctt cgtttcctta ggtgtactta tgtgggtttt ggggtggcaa gagagttttt 420  
 ttttgtgaac tctggtgtat cggatcaagt g 451

<210> 2921  
 <211> 331  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B6

<400> 2921

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 cgagaacgat gcggcgcggc acgggacgcc gccggccaag aaggaggccg tggaggcaat 120  
 gccgaccgtg gcaatcgccg gcggcaacga tggcgacgac gcggccagct gcccggtctg 180  
 cctggaggac tacgcggccg gcgagcgcg cgcgagatg cctgcacgc acatgttcca 240  
 cggcaattgc atcatgccgt ggctcgagat gcacagctcc tgccctgtct gccggttcca 300

gctgccggcc atcgacgaca agagctcatg c 331

<210> 2922  
<211> 433  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B7

<400> 2922

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attgaatggc atcggcacat aggtgtacgg gatggactgg actggtcacg gtggaagtga 120  
tgggtctccat ggatatgtgc aatctcttga tcatgctgtc agtgatttga aaatgtacct 180  
caagaaagtg ttagctgaga accctgggtct tccatgcttc tgcttcggtc actcgactgg 240  
tggaggtatc attctgaagg ctgcacttga tccagaggta gaaactctcc ttagaggtat 300  
tgtcttgaca tcaccagctg tccgtgttca gcctacacac ccaatcatag cggtcacggc 360  
accgattttt gccctcatcg cgccgaggta tcagttcact gcgtcccaca ggaacggccc 420  
gccggtgtcg cgc 433

<210> 2923  
<211> 387  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B8

<400> 2923

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aataaaagaa aaaaaaaaaa aggtggaggc tcttgatgat gatgttaatg atttgataat 180  
gtatctctcg aaagtcttag ctgatatccc tgatcttcaa tgcacgggct tcggtcattc 240  
aacgtgcttg atgtgaatac cttaaggctg cacttgatta acatgtagaa actctcctta 300  
tatgtattgt cttgacataa tcagatgtcg gtgttcagcc tagacattca atcatattgg 360  
tcatggcaaa gatttatggg cacatcg 387

<210> 2924  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-001-Q1-E1-B9

<400> 2924

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ttgcagtggc tcaacagcct gttctcgcca tcggcgagct cctccggtag cggcagcggc  180
agttcgcctc attgggagaa ttgaacaata atgcaatata agaatggatg attggttctg  240
cttgagccca ttggtgccaa tgtacatagg aagagcagga gcatgccggc atgaaaaatt  300
tggagccttt ttttcagtgt gtcaatttgg ctcatgtaat gttctctctg atatagttgt  360
catggctata aaaagaacac aaattggcaa gtaaaagaac ngagccatca ncaggtccga  420
acggcc                                         426
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<210> 2925  
 <211> 414  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-C1

<400> 2925

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tttttgtcag atgggtgtgc agtctataga tcaacatact ttggtgaatt tctatggaaa  180
cattgggaaa acccttcttt cattggagac ggttttcttt gatgtcctgt tcattatcca  240
aactacgtg ttgtaccctg tcaagaagga cgagaatggt aaggcaatca tttctgaaag  300
ggtagcccc cttatcaggc cttcggacaa gcctgaagaa gataacgtat gatctagctg  360
tagttatatt gcgcacattg cattcacgcg ctgtttgcac acaggccaca cagc      414
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<210> 2926  
 <211> 437  
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-001-Q1-E1-C10

<400> 2926

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tcggcgatcc tcgtcgtggc ggtggtcgtc ggtgtggtcg ccaccgtcac ccgtccggc 120

aagaaggccg gcgacaactt cacgggtccc ggggaggctt cccttgccac gtccggcaag 180

tcggtcaagt ccctgtgcgc gccacccta tacaaggagt cgtgcgagaa gacactgtcc 240

caggccacca atggcaccga gaaccccaag gaggtgttcc acagcgtggc caaggtggcg 300

ctggagtcgg tccagacggc ggtcgagcag tccaagtcga tcggcgaggc caaggccagc 360

gactccatga ccgagagcgc gcgcgaggac tgcaagaagc tcctggagga cgcgcccgac 420

gacctgangg gcatgct 437

<210> 2927

<211> 428

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-001-Q1-E1-C11

<400> 2927

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gcggtggccg tcgtcctcct gtcggcgcgc gcgtgctct gcctgtacca cctccttttc 180

ctctccctgt ccgtcccga cccggcagca gcagcagccg tcccccgccg cgccgggtggc 240

caccatggca gcaacgttcc gtccgggtca ggaaccgcca acgtcgtcct ccgcttcggc 300

ctgtccgggc agccgctccg cctccacgac ccgcctccg ccgcggcct cccggacatc 360

gacaccttc gcggcaagct cgagcggctg ctctctcncg acgaccacga acccggtgg 420

tcccccg 428

<210> 2928

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-C2

<400> 2928

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atgacacgga cgatgtgcct aggcctgctg cttctactac tggcggcggc gtcgacagcg 120

acggcgcatc tcacggtcgg cgatgtggat gagtacgtgt ccaagcgcac gcaggagtcc 180

cgccacagga acaacggtgg cgcgggcata gatgacctca tctccagtgc ggcgcgcttc 240

cacgccaacg tggatgcacg cgcctatggc cgtagatccg acctgcagga ggaggcaaca 300

gctaccgtaa taaccaaagc ggaagcacia gaggcttcag ctgaaggtgg cgattaacct 360

acctaaccat attatttatt cattcatatg catgcatcct tgttgctatg cca 413

<210> 2929

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-C4

<400> 2929

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acggccacgg caccatcgac gggcagggag ccctggtgtg gagcaagaac cagtgccagc 120

attcttacia ttgcaagatc ctcccgaata gcttggtgct ggattttgtg acgaacgtcc 180

agatccgcgg catcacgctg ctcaacagca agttcttcca cctcaacatc ttcgagtgca 240

agaacgtgct gatcgacaaa gtgacggtca agggccccgg cgacagcccc aacacggacg 300

gcatccacat cggcgactcc agcaacgtga ccatcagcag caccaccatc ggcgtcggcg 360

acgactgcat ctccatcggc cccggggagca agatgatccg catccatggc gtcaag 416

<210> 2930

<211> 451

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-C5

<400> 2930



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 gcggcgccca aggaggcgag gaggaagaac tggtagccggc cggccaagtc gtcgtcgtgg 120  
 cgcaggatcc ggtgctcgca gaaggagtgc gcgctgctgc cctacaacac gtgccagagc 180  
 cccagcaagg cggagtctgt cagctactac cagcagatgc aggacggcac gttgacgatg 240  
 ggcattctacg gcaaggagaa ggcgacgggtg acggtgtcgg acgggcgtat ggccaagctc 300  
 cctggcctca tccttggtgt ctccgtcctg gaggcggcg gcagcgtgga cggccacgac 360  
 ggcgtgctct cgctggggaa cggcgagatg tccttcgccg tccacgccgc caagcgcttc 420  
 ggccagcgct tctccttctg cctcctcagc g 451

<210> 2931  
 <211> 453  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-001-Q1-E1-C6  
 <400> 2931

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 aaccacccac cgcgcgccgc gcctaaccct agccctaacc gtggccgcgg ggtcgccgac 180  
 ccgcgcggcg cctcggacga ctgcgcgtcg tcgaagcgca tgctggcctt ccacttcctc 240  
 cgcgcgctgg cacggatcca cagcaccacg ccggcgccgc gccgcccgcg catcatccgc 300  
 cgcgcggtct actcgtccat ggcgcgcgcc gccagcacgc gccgggcctg gacgcaggcg 360  
 ctgctgctcc gccgggcgcg ctacgcggg gtggccgtcg tcggctcgtc caggcgcgcg 420  
 gtctgctgc ggaagcgct ctccgcctcg gcg 453

<210> 2932  
 <211> 435  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
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aatggaaagg atgttgaagg cggattggaa gaaggggaata agaaaaggaa ccgtaccggc 180  
tggtggaata acgggcgctg ccggcttaac tgcgggacaa cgagtacatc caccgccact 240  
accgctgcga atggccgctc ccgcacgttc tgctctccgc cttctccatc cacaacgaga 300  
ccctcaacgt ctggacgcat cttatangat ttttcatctt tctcgctctg accatataca 360  
cagcagcaca agttccaaat gcagtagata tccggagctt gcagcatttg ccagatgtac 420  
tgagaaaggc tgata 435

<210> 2933  
<211> 382  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A6

<400> 2933

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gagggtggcg tcattggggct cgcgggggac gggctggcgga acaccgcaa cctcagtaat 180  
agtgaaaatg gtcggttcag ttatggagtt gcaagttctc ccgggaaaag agcatcgatg 240  
gaggacttct atgaggcaag gatagacgac gttgacggag agaaagttgg aatgtttggt 300  
gtgtatgatg gtcattggagg agtcagagca gctgagttcg ttaagcagca tcttttcaac 360  
aatttaatcc aacacccaaa gt 382

<210> 2934  
<211> 426  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A7

<400> 2934

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ccctgccgct tccgtcgctg ctctcctcctc ccgccttctt cttccaccac ccctgctgca 180

cggcgcaagg ccgcgccgaa aacatctcgg aggtcgatgc cgcggtccgc gcccgcgcggt 240  
ccgagctgct ccgcgacgcc agcagccagc tcgtcgacct gccctcccg gccaacctct 300  
ccggcgcggg cgtcagggcc tcggccctca acgtgcgag caacgcgctc tgggcccggag 360  
gcgtcaaac caccggcttc accgtctcgc cgcgcgctgt gccggccccg ttcgcgcgcc 420  
gcctcg 426

<210> 2935  
<211> 456  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A8

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tcaaagccaa gcaaagcaac ctccaggcca tggatgatcg cggcgcgggc ggtggcgcg 180  
cggccttttg gatagtagcg gccatatgct tcgtggctta cactcgaag aagaggcg 240  
cgctgggtaa cagcgtgtcg cattcatcgg gatggctgcc cgtctacggt ggcaactcgc 300  
acacaaacgc cagcaagtcg tccggcggca agagcgcggc gctcaacctg aacatcacgg 360  
ccatgtgccg gcacttctcg ttccaggaga tcaaggcggc gaccatgaac ttcgacgagt 420  
cgctgggtgat cggcgtgggc gggttcggca aggtgt 456

<210> 2936  
<211> 438  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B10

<400> 2936

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gccagatccc tctcctgcaa ggtttctttg cgagtggccg gagaagatga tgggcggggt 180  
cctctccagg gtctcctgc tggcttttgg ctatgcctat cctgcctatg aatgctacaa 240

gaccgttgaa ctgaacaaac cacagattga gcagctcata ttttgggtgc agtattggat 300  
 tttagttgcc ctgttgacag ttttggacag aattgggcca tttacaatat catggctacc 360  
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 gaactacgta tgtgtatg 438

<210> 2937  
 <211> 419  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-006-Q1-E1-B11  
 <400> 2937

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 cttcacgcgc ccgcgcgcgc tcttgccggc ccggttcgcg cgcgcgctcg caatcgctct 360  
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<210> 2938  
 <211> 448  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-006-Q1-E1-B2  
 <400> 2938

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 gtcctgcggg cccccgaagg tgccgcccgg tcccaacatc accaccaact acaacggcaa 180  
 gtggctcacc gccagggcca cctggtacgg tcagcccaac ggtgcccggc ctcttgacaa 240  
 cggcggtgcg tgccgggatca agaacgtgaa cctgccaccc tacagcggca tgacggcgctg 300  
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caaggaaaaa cctgagtgtc cgggcaatcc agtcacggtg tacatcactg acatgaacta 420  
cgagcctatc gctccctaac acttcgac 448

<210> 2939  
<211> 446  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B4

<400> 2939

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catgcggggc cccgaagggt ctgcccggtc ccaacatcac caccatctac aagggcaagt 180  
ggctcaccgc cagggccacc tggtaggtc agcccaacgg tgccggcgct cctgacaaca 240  
gcggtgcgtg cgggatgaac aacgtgaacc tgccacccta cagcggcatg acggcgtgcg 300  
gcaacgtctc catcttcaac gacggcaaag gctgccggtc atgctacgaa gtgagattca 360  
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agcctatcgc tccctaccac ttcgac 446

<210> 2940  
<211> 442  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B5

<400> 2940

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gttgtccaac tcgtcggata ctgcgccgaa gggagcaccg cggtccttgc ttatgagtat 180  
gcaactaggg gatcattgca tgatatctc catggtaaaa aggggtgtcaa aggagcccag 240  
ccagggccag tcctgtcatg gatgcagcga gctaggattg ccgtatgtgc tgctcggggg 300  
ctcgagttcc tccacgagaa ggccgatcct cgagtgggtc accgcgacat caagtcaagc 360  
aacatactgc tctttgacca tgatgttgcg aagatcgggg acttcgacat ctcaaaccag 420

gccccctgaca tggctgcgcg cc

442

<210> 2941

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B6

<400> 2941

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cgccgcggga gtgctgctgg tcctgtccgc gcttggtaac gctggcgcg gacgaggacc 180  
cgtacttggt cttcgtgtgc aacgtgacgt tcgggtaccag gtctctgctg ggcgtgcccc 240  
agaatgtcat catcatcaac agcgacttcc ccggcaccag tatcaactgc tccgctagca 300  
gtatcatcgt cgtcaatgtc ctcatcctc tcgaccatcg gctctcttcc acctgtacag 360  
ggatgcatca catgaagaac tcttga 387

<210> 2942

<211> 456

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B7

<400> 2942

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ccggcagaaa tgccggcgac aacttcacgg tcccgatgga ggcttcgctt gacacgtccg 180  
gcaagtcagt caagtccttg tgcgcgtca gcctatacta ggagtcgtgc gataagagac 240  
tgtcccaggc caccaatcgg accgacaacc gcaatgaggt gttccagatc ctggacaagg 300  
tggaactgcg ctcagtccag acggaggtcg agcagtcgac gtctatcagc taggccaagg 360  
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ccgacgacct gatgggcatg ctcgagatgg ccggcg 456

<210> 2943  
 <211> 459  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-006-Q1-E1-B8  
  
 <400> 2943

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 gaggagggca acgagggcga cgggttctac ggcggcataa ggaagctccg cggcaaggat 120  
 gacatctcca agtggaggca gctgtggcca acagacgtcc tgnagtaagc aggagccgca 180  
 tcccttctca caccgagatt gatccatcgc tcaaatagaca cgcctttctt tcatcatatt 240  
 gaccaaattc gtcgtctctg tcgcgctgtt gtaaacgggt tagcagaaga acacacaggg 300  
 tgacaacaga tccttggtcg gttatttcta atacatacgg attggatgag attggaaaag 360  
 attaagacga agttaaactt gtttgcaatt cagacacatc caatctcatt cagttcacat 420  
 ggattgacag ctaaccgatc aaccctgtag ttggacaag 459

<210> 2944  
 <211> 414  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-006-Q1-E1-B9  
  
 <400> 2944

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 tcgccgttcc tttttgcctt gttggcgctg gcggcgaccc tgctcagcgt cggcgacgcg 120  
 ttggtcgctg acggcctgca ggtgggggttc tatggcaaga cgtgcccggc ggccgaaggc 180  
 gtcacagcgc acatcgtcaa caacgaaatc gctatggacc ggggcatctc ccctggcctc 240  
 attcgctctt tctttcacga ctgcttcacg acgggttgcg acgcttccat tctcctggac 300  
 gagtgcgccg ccggcgacgt ccagagagaag gagtcgtccg ccaacggctt caccctgggc 360  
 gggctcagaa ccatcgacat cgccaagtcc accgtacagg gcatgtgccc cggc 414

<210> 2945  
 <211> 438  
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-006-Q1-E1-C1

<400> 2945

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cggccttcaa ccggcgacga gcatccacca gaaacgtgga gctcagagca ttggtgcctc 120  
tttctctttt caacaaggat tccggtgcct tgtttcacia gacanaaaaa gtctcaaggg 180  
tcttgattct tgtatgaact caagatttat ggtggatctt ggagctgtgg gatgctaagc 240  
ctgggtctagc tactagatta tgaactctct gctgatctaa tagcatttct acaagaattc 300  
ttttgctgga aggtttatta gttatttgca acaatgaagg aacatctaata gcttaatat 360  
gatgacctaa gcattcttga gcctaacgag gtcattggga cagtcaagaa taaatcatct 420  
ggggaaacca ttgcacat 438

<210> 2946

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-C10

<400> 2946

gtaacgggtcc agaattcccg ggccgaccca cgcgtccaat cgtcggcgca gagagagact 60  
tctctgcctc catcccatcc cgccgccgcc gtctctacgg tcgctaataa gccgccgcat 120  
ccagggatgg agatgaagaa gatcgctgc gccgtcctcg tcgccgcctc ggccaccgtg 180  
gcgctggccg cgagggcgcc ggctccgtcc cccaccagcg gtcctccgc ggctgcaccc 240  
gccatcgctc gggccgccgt ggctccttc ttcgcgtact acattcactg agccgccgga 300  
cgaggagccg gactgccgga gggaagagac caaggggggg agagacttgg ctgcgctgcg 360  
ctgctctgct gtcgccgcgc attcccgatg cgtgggtggg tgtgctctga ttgggcacgg 420  
cagtggcaca ccttcgtctt c 441

<210> 2947

<211> 218

<212> DNA

<213> Zea mays



<223> unsure at all n locations  
<223> Clone ID: LIB148-006-Q1-E1-C11

<400> 2947

ggtaccggtc cagaattcnc gggccgaccc acgcgtccag cggaaggccg ccgtgcccgt 60  
tcttcccacc tgcagcaacc ggccattgcc cgcgggttgc ttgcatttgc atggctgccc 120  
gctgcgctct ggaaccttgc actaccggtt cggcggccta ggcgcggggc atcttccgag 180  
tgctgcgctc tctgtacacg ctcagatcct ctctcggg 218

<210> 2948  
<211> 416  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-C12

<400> 2948

ccacgcgtcc acccacgcgt ccgcggacgc gtgggctgta gtccttgcca aggcacccga 60  
gtctgctgcc acgagaactg cccccgctaa ggcacctcaa gccgcctcca cccccgccgt 120  
tgccgctgcc ccctcgtcgt cgtcgtctac gaagtctggt ccctctgccg cgccgaccat 180  
cgccgcctct acaccgtctt cttccacgga cgaggagtgt agcccttccc cgtcggcatc 240  
caccgccgag gtggcgctcc ctgccgtga tgggcctgct gagggaccgg cggctgctga 300  
tgctccggt gctgctaccc ttggtagcgg agctgccatc gctggtgtcg ccgctgctgt 360  
cgctaccatg atcttctact gagttcacca atgaccgtgt cgtcgagggt gggcac 416

<210> 2949  
<211> 361  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-C2

<400> 2949

ggtcaagaat taccgggtcg acccacgcgt ccgccacgc gtccgggaat aactctctct 60  
cccgtcgccg ggatcccgc ggtgacaatg gtgagggtggc tgccgccgcc gccgccagcg 120  
gacggcgaga tacccttcgg acacgacgcc gtcgccttgt ccttcttcgt ggcgtgtgtg 180

gccgccaccg tcgcgctcgc gtcgtccatg tgctcggcat gcggtcgcaa gccgaaggcg 240  
gccacccgtg cagacccggc cgcttcggac cagtcaccg ggacgggctc gggctccgtc 300  
tccggtggcg gcggaagcca ggaggctagc gccgcggagg cggaggagga agtggtgaga 360  
c 361

<210> 2950  
<211> 297  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-006-Q1-E1-C4  
<400> 2950

cacgcgtcca cgctgatcg gccactacc gctggcggtc gtccaaagg ctgtagcgtc 60  
ggtgctgcag tgcctcgtcg aggactcgac catcagggca gccatgggcc acgtcgtcgt 120  
ctcgtcgcag tacctcacia tcgcgcagga gcacgacgat gccaccggc cgtcgcgcgt 180  
gtacccactc gatcacgctc aggtgcggc gctcaacatc cgggatctga acgctcatct 240  
ccgcatgtcc gccttgctc tacacgagt agtaccata ttcataatcg atcatct 297

<210> 2951  
<211> 439  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-006-Q1-E1-C5  
<400> 2951

aattcccggg ccgaccacg cgtccacca cgcgtccggc cttttcccca cctcgatctc 60  
gcgctaggtt ttccgcacac cgctctcgtc ctccgcgaag atgccgaaga acaagggtaa 120  
gggaggcaag aaccggaagc gtggaaagaa cgaggctgac gacgacaagc gcgagctcgt 180  
cttcaaggaa gacgggcagg agtatgcgca ggtgaccgg atgctcggca acgggcgggtg 240  
cgaggccacc tgcgtggacg gcacgcgtcg cctctgccat atccggggca agatgcacaa 300  
gaagggtgtg atcgcggccg gggacatcgt cctcgtcggc ctccgcgact accaggacga 360  
caaggccgac gtcactctca agtacatgaa cgacgaagcg cgctgtctca aggcctacgg 420  
tgagcttccc gagacgctc 439

<210> 2952  
<211> 440  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-C6

<400> 2952

attccccgggc cgaccacgc gtccaccggg aattgcgtat cgaggtcgtc gccgggggatg 60  
actacgctcc ggggtccagc ggcgccggtg ccggaggagg tggcctcgcc gactgggagc 120  
gccaccgcaa gcgtcgccgt gaggagctcc tcaaggagaa agaattctaca actcacatgt 180  
cagaccaaac aaattgcaat gaagttgaag cagaagagtg tgatgcgtat gaagaaaatc 240  
aagaggaacc tgtagcaatg gtagaagaat ctccaccoga tgttggccaa gatggtgatg 300  
atgggcaagg tattgattcg tcttgactg tggttggtac accagtttta cgagtcaaga 360  
caatttatat cagttcagcg attcttgctg cgaagagtc tttctttatc aagcttttct 420  
aaaacggcat gaaagaatcg 440

<210> 2953  
<211> 392  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-C7

<400> 2953

aattccccggg ccgaccacg cgtccaccgg gaactgcata ccgatgtcct cgccggggat 60  
gactacgctc cggggtccag cggtgccggt gccggatgag gtggcctcgc cactgggagc 120  
cgccatcgca aacgtcgccg tgaggagctc ctcaacgaga aacgaatcta caactcacat 180  
gtcacaccaa acaaattgca atgaacttga agcacaagag tgtggtgcgt atgaagaaac 240  
tcaagaggaa cctgtatcaa tggtaacaaga gtctccacc gatgttggcc aagatggtga 300  
tgatgggcaa tgtattgatt cgtcttgac tgtggttgg acaccagttt tactagtaaa 360  
gataatttag atcagttcat cgattcttgc tg 392

<210> 2954  
<211> 446  
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-C9

<400> 2954

ggtaccggtc tagaattccc gggccgaccc acgcgtccgc ttaattgcgc cactgctcgt 60

tatcctcctc ttgcattgca ttgcaggctg tagttgagca gcagcaacca ctgcacagga 120

tgctcgtggca gacgtacgtc gatgagcacc tcatgtgcga gatcgagggc caccacctga 180

gctctgccgc catagtcggc cacgacggcg ccgtttgggc ccagagcacc gcattcccac 240

agttcaagcc agaggagatg accaacaatca ttaaggactt cgacgagcct gggtttcttg 300

ccccgatcgg cctcttccct ggccccacca agtacatggt catccaaggc gagcccggcg 360

ctgtcatccg cgggaagaag ggatctggag gcataactgt gaagaagacc ggacaggcgc 420

tggtgatcgg catctacgac gagccc 446

<210> 2955

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-D1

<400> 2955

ccggtccaga attagcgggt cgacgcacgc gtccaggagg aagaggaggt tctggagaaa 60

gaagatgaag gccaggaagg agatcggcgg gctggtggac ctcgtaacg atatttcggc 120

caagtcagag gagagcctaa gggtttagcaa ccaaaacatg cccagcaggg cgctgacgtt 180

cagtcagctg agcgccgcaa cggacggggt cagttcgag aacctgctcg gagaaggcgg 240

ctttggacgg gtgtacaaag ggctcctcga ggacaccgga gaggttatcg ccgtgaagca 300

gctgaacagg gacgggctcc agggcaacgg cgagttcctc gtcgaggtgc tgatgctcag 360

cctcctgcac caccgaacc tcgtcaagct gctgggctac agcaccgact ccaaccagcg 420

gatcctggtc tacgagtaca tgccc 445

<210> 2956

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-D10

<400> 2956

ccacgcgtcc acccacgcgt ccgccacgc gtccgaaact ctttgatctt ctatctgaca 60  
gaaggcaact attgatgagg gaagatggca agaaacaagt ttgcattgtt ggtctacagg 120  
aatttgaggt ttctgatgtt cagattgtca aggaatatat tgaaagaggg aatgcagcca 180  
ggagcacagg gtcaacaggg gccaatgagg aatcatcaag gtcacacgct attctgcaac 240  
tggctgtgaa gaagcatatc atagtaaaag ataccaggag acagagagat cgtgatgcta 300  
atgaagctaa aaatacaaag gctgtgggga aaatatcatt tattgatctt gctggaagtg 360  
agcgtggtgc tgatactact gataatgata gacagacaaa gat 403

<210> 2957

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-D12

<400> 2957

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catgcatgca tgtgacgacc tctcctcctc gctgtctctc tgtatctgca actgcaagca 120  
aggaaattaa ttaaaagaag atcggcgcca tggcggcaac gacgacgggg atgcagatga 180  
tgcaggcggc ggcgttgctg ctgtgcttgg ttgtgttggc ggcgtctacg cgggtcgcgc 240  
tgggcaactg ccgcgacgac tgcattgctg catgcaacgg ctggaccatc gtctgccagc 300  
tctcctgtgc cagcgcattg tacggagaag tcgggatcac aaccttaggt acgtcggctg 360  
tattagcgaa agcagaagcg cctgcatcag caccacaagc agcacaagag cgaggcgccg 420  
ccgccggcgt gtccgcgctc 440

<210> 2958

<211> 372

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-D4

<400> 2958

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 tcacgtctaa gtgcgctaac agcctgccat gtcagggcgt gcacctcgtc aacgtcgaca 120  
 tgtagtaciaa tggatacggg aacaagacca tggacgtctg catgaatgac atcggcaagt 180  
 ccatcggatt ggcaaacgag ctggcgtgca tttgaaccaa ttgactatca ttcatatatt 240  
 atgtactatg tttgtgcacg tgcgttgaca ctgaagttat acattagtagt caccctcatc 300  
 tacgtaacga tagatatcac tatgagattc aaagtaagat acaaagaggg cggtcgctct 360  
 acaggatcta aa 372

<210> 2959  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-D7

<400> 2959

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 gttgcatcag ggaacaaatt ctgcaagggt ggtgcctgtg atttctctga ttccagtaac 120  
 tcctcgaaag atgccaagga gagatccacg tccatgagga agcttataat cgcagtgatc 180  
 ctttgcatac tattcatgac ggtggaagtg gtcgggggca tcaaagcaaa cagtcttgcc 240  
 atcttaactg atgcggcgca ccttctttct gatgtggcag catttgccat atcgttattc 300  
 tctctctggg ctgctggatg ggaagcaaca ccgcagcagt catatgggtt cttccggatt 360  
 gagattcttg gtgccttggg ctccattcag ctcatatggc tacttgctgg catactggta 420  
 tatg 424

<210> 2960  
 <211> 448  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-006-Q1-E1-E1

<400> 2960

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 ctgtccggag aggaggggca ggaggaggcc gcaccaaata tatctgggga tcggagcgcg 120

ggcgacaaga tgccacgcgg cggcaagccc ggggttcgt cgaagccgaa cccgttcgac 180  
 tcggactcgg actcggagtc cagcaataag cggcgaaca agtcgggggc gtcgtcgtac 240  
 cagggccccc cgcacgcaa gaagcggtag aaggacgggt tccgggactc gggcgggctg 300  
 gagaaccagt cgtgacagga gctggagcac tacgcggcgt acaaggccga ggagacgacg 360  
 gacgcgctcg ccggtgcct ggcacatgcc gaggacatca ggcangacgc cagcgacacg 420  
 ctgatcacgc tgcacaagca gggggagc 448

<210> 2961  
 <211> 446  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-E10

<400> 2961  
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 caacatcctg ctcaagggcc ttgttggcat cggtagacct gattctgcgc tgaaggtagt 180  
 cgacgaaatg actggatggg ggatcgcccc ggatgtcgtc acttacacga cggttctcac 240  
 tgcctactgt gccaaagggg atctcgaggg tgcacagcag ctctttgacg atattattgc 300  
 cagtgggctg aggccagatg ctactatgta cacagtgtc atagatgggt attgccatcg 360  
 taggaagttg caagatgcag caaggatcat ggatgagatg ggagctgctg ggggtgcagcc 420  
 aatgatgtt acatactctg tggtaga 446

<210> 2962  
 <211> 394  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-E11

<400> 2962  
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 cgatcgaatt aggcgccttc ttcgtccac gctccgtctt tatttgtaat ctgaagctta 120  
 caggaacatt tgagtggatc atggacggat tggtaggcct cttgaaagtc cgggtggtga 180

ggggcatcaa ccttgccctac cgcgacgcaa gaggcagcga tccgtatgtc gtcctacgac 240  
 ttggcaagaa gaaacttaag acgagcgtga agaagagatc tgtgaaccca atctggcacg 300  
 aggagctaac tctgaccgtc aaagatccca gcttacctct gaagctggag gtgttcgaca 360  
 aggacacgtt cagcagggac gaaccgatgg ggga 394

<210> 2963  
 <211> 372  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-E12

<400> 2963

ccacgcgtcc acgctgatgc ttcgtctggg gccagaaga acatcttcaa gcagaagcct 60  
 ccggaagccg atgccgtgc aagcagctgc tgttaacatg cttttgccat gctaattccg 120  
 cgtcctcccg tggatgatga cgatgatatc tttgtttggt gtgtcggttt attgtttctt 180  
 cttcttttgg tcctgtatat gctgaattta ttacacccac acataactgt acgttggcag 240  
 cagctatata atatatcggt ttttgttgtt aaaaaaaaaa aaaaaaaaaa aaaaaataa 300  
 aaaaaaaaaa aaaaaataa aaaatgtaaa acaatgaaac tcacaaaaaa gaagtaaaaa 360  
 aaaaggggcg gc 372

<210> 2964  
 <211> 431  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-E5

<400> 2964

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 tagcaccaca cgcaggtacg aagaaggcga cgaacatggc gaggctggcc ttggtagcgg 120  
 cggtggttct gtgcctcctg ttagcgacag ggccgcaggg ggccatcagc gccgagggga 180  
 tgggtgcatt tgacaatttg atcagctgca aggtactggg caactgcgac aagaacctgg 240  
 gccccgaggc ctcccgccca gggaaacccg ccaacgacta caccgcggc tgcaaccgca 300  
 tcaccggctg tcgcggtga tcatatctct ctggtcgatg tgcgcgcaat gtcaatgtcg 360



cacgcgcgtg caggtaccag gcctcagcgt gtggtgccgc gtgtgtgtat atattacaca 420  
catgcattat a 431

<210> 2965  
<211> 434  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-E6

<400> 2965

ccacgcgtcc acgacggcgc cgtttgggcc cagagcacccg cattcccaca gttcaagaca 60  
gaggagatga ccaacatcat gaaggacttc gacgagcccg ggttcctggc cccgaccggc 120  
ctcttcctcg gccccaccaa gtacatggtc atccaaggcg agcccggcgc tgtcatccgc 180  
gggaagaagg gatctggagg cataactgtg aagaagacag ggcaagcgat ggtggtcggc 240  
atctacgacg agcccatgac ccccggccag tgcaacatgg tggtcgagag gctcggcgac 300  
tacctcgtag agcaaggcct gtgaatggat tcatttaacc tcgctcgctc gcttgtccat 360  
ggttcgagca tccagcagca acgataccaa catcagcatt atttaattgg tagcctcctc 420  
tagctacgca cgca 434

<210> 2966  
<211> 431  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-E7

<400> 2966

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gttgttggct gccggccggg tactaccgcc tgcacgagca gcggctagcc acagcccaca 120  
gacagacgac gtcaggtctt ggcaggtgtg caagcagaca gagctcgctc ggtcgccatg 180  
tctttcaccg gcacgcagga caagtgcaaa gcctgcgaca agacggtcca cttcatcgac 240  
ctgctcaccg ccgacggcgt ctctgaccac aagacctgct tcaaatgcag ccaactgcaag 300  
ggcgtcctct cgattagcag ctactcttcc atggacggcg ttctgtactg caagacgcac 360  
tttgaacagc tcttcaagga aacgggggaac ttctccagga aattccaagg tggaggtgga 420

gcattcttcaa a

431

<210> 2967  
<211> 443  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-006-Q1-E1-E8  
  
<400> 2967

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cgaggagggtg gccagggttc aggagggcgt ccggcagggc gccttcggcc tgctcctcaa 120  
ctccgtcgtc ctccggagcca gctccttcct catcgagccc atgtgccgca agctcaccgc 180  
caaggtcgtg tgggtcatga gcagcttcct cgtctgcgtc gccatggcct tggtcaccgt 240  
cctcagctcc tggtcgctcg gcgacatcgg gggcaacgtg caggacgccg ccgccgtgga 300  
taagggcctc aagaccaccg cgctcgccat ctctgtcttc ctccgcttcn cattcgcggt 360  
cctatgcagc gttccgtccg ccgtgacggc acagctggcg gcggccaagg gcggccggca 420  
agggtctgtg acgggggtcc tca 443

<210> 2968  
<211> 441  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-006-Q1-E1-E9  
  
<400> 2968

ggttacggtc tagaattccc gggccgaccc acgcgtccac ccacgcgtcc gcgacatttc 60  
gaataacaca gttgagcgcg acgatgggat cctcgcctaa taacatcatg gtcgtgggtg 120  
tcgtccttgc agcgtcgtc gccggcgggt catgcgggcc cccgaagggt ccgcccggtc 180  
ccaacatcac caccaactac aacggcaagt ggctcaccgc cagggccacc tggtacggtc 240  
agccaacgg tgccggcgct cctgacaacg gcggtgcgtg cgggatcaag aacgtgaacc 300  
tgccacccta cagcggcatg acggcgtgcg gcaacgtccc catcttcaag gacggcaagg 360  
gctgcgggtc atgctacgag gtgagatgca aggaaaaacc tgagtgtcgc ggcaatccag 420

tcacggtgta catcactgac a 441

<210> 2969  
<211> 374  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-006-Q1-E1-F1  
  
<400> 2969

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gtggccaccc caacgttgct ggctcgagg gcatcatcac ctcccgtcc tctccctcca 180  
tctacctgt cttcgagtac ctcgagcacg acctggccgg cctcagctcc tccccgaca 240  
tcaccttcac cgagccccag atcaagtgt acatgagaca gctgctggag gggctggcgc 300  
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acagcggcga gctc 374

<210> 2970  
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<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
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<400> 2970

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tggttttatt agaacactta atttgtgatg tctcgacata attgccggtc acttaaagga 180  
ggagtgggct gctgcatttc tatgaaaact catatgtgag caaatgctac tctcctagt 240  
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ttgaagatag aactgtcgt catttgatca accctatcta catgtgggtt gcgatatttc 360  
catattatgt ggacagctta cacacagtta aatcagactg gatcaccaat ngatgaatca 420  
taagcttgct ctgaacggga a 441

<210> 2971  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-F11

<400> 2971

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tctagattag tagtcgtaaa aaacgctggg cacgcggcca atctagagaa gtccaaggag 180
gtgtgcaaga gcatcattga ctattttcag gaaccggggt caagtgattg agttgggggg 240
aaaggagggtg aagccacaat gtgacggttg gaaattctga gctaggacat cgtcctgtga 300
ttggcccgca gttttgccgt ttccttgga acttgtaatt gtaacaaaag aacctttgta 360
atcacacgga ccatacaagt ctctgtaaa ttgtctgagg gctttctgcg ctcaa 415
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<210> 2972  
 <211> 340  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-F12

<400> 2972

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cttgcattca ttattcaggt tcttgaccca aagctacatg accacctaca aactcttggc 120
ggaagtgact acctttttgc gttccgaatg ttcattggtgc tatttaggcg tgaagtatca 180
tttgagagact ctttatacct ctgggagatg atgtgggctc tagaatacga ccctgacatt 240
ttcttcgcaa catgcgaaga acaagggtgca gtacataaaa ataaagtttc taaatccaaa 300
ctgaaaggac tgcgccattt tggcaagtgg gataaggaca 340
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<210> 2973  
 <211> 443  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-006-Q1-E1-F2

<400> 2973

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cgatgagagc cttgttctct ctggctctct tctgcatcgt gcatgggtgag aatgaagagt 120

caaagggcat cgatgcgaaa gcgtccgggc ctgggtgggtc cttcgacatc accaagttgg 180

gcgcctccgg caatggcaag acagacagca cgaacgctgt gcaggaggca tgggcatcgg 240

tgtgcggcgg cactgggaag cagacaatcc tcatacccaa aggtgacttc cttgtcggac 300

aactcaactt cacaggccct tgcaagggcg acgtgaccat ccagggtggat ggcaatctgc 360

tggcgaccac ggacctaaagc cagtacaacg accatggtaa ttggatcgac attctacgtg 420

tggataacct gctcatcacc ggc 443

<210> 2974

<211> 370

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-006-Q1-E1-F3

<400> 2974

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cctaccgga cgcaagaggc agcgatccgt atgtcgtcct acggcttggc aagaagaaac 180

tgaagacaag cgtgaagaag agatccgtga accccatatg gcaagaggag ctaactctga 240

ccgtcacaga tcccagccaa cactgaagc tggaggtgtt cgacaaggac accttcagca 300

gagacgacnc catgggagac gcngacgtgg acgtggcgcc actgatggag gcggtgagca 360

tgaacccgcg 370

<210> 2975

<211> 428

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-F5

<400> 2975

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attggtaggc ctcttgaaag tccgggtggg gaggggcatc aaccttgccct accgcgacgc 180  
aagaggcagc gatccgtatg tcgtcctacg acttggcaag aagaaactta agacgagcgt 240  
gaagaagaga tctgtgaacc ccatctggca cgaggagcta actctgaccg tcacagatcc 300  
cagcctagct ctgaagctgg aggtgttcga caaggacacg ttcagcaggg acgacccgat 360  
gggggacgcg gaaatcgact tggcgccgct ggtggaggcg gcgaacgcaa gcccgaggcg 420  
gagcctga 428

<210> 2976  
<211> 434  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-006-Q1-E1-F6  
<400> 2976

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gagggccacg gcttcgccgt cgactggtgg gccgtcggcg tgctcgcccta cgagatggcg 120  
ttcggggcgga cgccgttcaa gggccagaac cgcaaggaga cgttccggaa cgtgctgcag 180  
caggagctcg agttcccggg ggacacccgg tggcggacgc cggagctcgc ggatctcatc 240  
tcgggcctgc tggagcggga cccgacgagg aggtcgggt acgccggcg cgccgacgag 300  
gtccggggccc acccgttctt cgccggcgtc gcgtgggaca tgctcacgga ggtgtccagg 360  
ccgccttaca tcccgccgcc ggccgacgaa ggactcncgg acgtcgaagg gtctgacgtg 420  
aggggccact tcaa 434

<210> 2977  
<211> 437  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-006-Q1-E1-F7  
<400> 2977

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acctcctcct cccccgccg ccaacaactc agccgccgca accgccacat cagccatggg 120  
cgctgcaca tccaatccca acacgcttga tgggcaggcc ccagctgagg ccgcagtctc 180  
cacacccaac gttgcgcccc agccactct aatctccgtt gacgttgccg ctgatgaaca 240  
cgtacctgat aaagtgggtg tggacgagcc ggctgcggcg gccgacgttg agcatcagac 300  
ggctaatagag gtggtcgctc cagaggcggc cgtcgccgag cccgatcaca aggaggagga 360  
acccttggat aaaaccgtcg tcaaggagga caaccagcg gaagccgcc ttgcagagga 420  
aaaggtctcc accgccg 437

<210> 2978  
<211> 453  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-F8

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ttcgccaccg actgcgggga caccttcgac gagcgaccag acctcaactc acccataccc 180  
ggtgcacagc gccacgtcaa ccgctcatc agcaactgcc ttgacctagc agccaccatt 240  
aaggaacaac cctagatgcc tatgatgtgg aactgacag aaatttatct acaactggct 300  
gaagaagaaa cagtcccaca tctacttca aatttacgac atgtctgcac atactaataa 360  
ttgtgtggct tatcgatttt ggctcttttt atatcctttg atattgctgg ggcatacaaa 420  
gcaatcatcg gttattaata cgtggatacg tgt 453

<210> 2979  
<211> 417  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-006-Q1-E1-F9

<400> 2979  
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atacccgctt gccccggctg gtcctcctcc cggggcgctc ccgccgcggc ggaaaaaact 120

tccgccggag ccgaaggcga aggcaacggc ggtttgaagg ccgttggcga agcggccggc 180  
 ggcggtatac caacccaac cgaggaagcc aatcacacc ggcctctgga gacacgaaga 240  
 cccctttcga cacgcggcgg tcaactcaacc catagcgagg cagcgcaatc cacgcgtgcc 300  
 gctgaggaga cgacgacgac tttttcgaca ggcggcgggg gttacggcgg tgcaaccggc 360  
 aaggcttcca caagcggcgg cgggctggac cccgacggcg acccagaggt tgggctg 417

<210> 2980  
 <211> 337  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-057-Q1-E1-E4

<400> 2980

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 ctgaatttta tgccgtttca gattcgtgga gaaatgcaag taccctgagg atggttcacc 180  
 gcctagatcc ttgagatata tcggaagtat ggttctgat gtccatcgca ccttactata 240  
 cgggggcata tttttgtacc cagcagacca gaagagtcca aacgggaaac tacgcgttct 300  
 gtatgaagtc ttcccgatgt cattcctgat ggaacaa 337

<210> 2981  
 <211> 423  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-E6

<400> 2981

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 gaattttatg ccgtttcaga ttcgtggata agtgcaagta tcctgaagat ggttcaccgc 180  
 ctagatccct gagatatatc ggtagtatgg ttgctgatgt ccacgcacc ttactagacg 240  
 ggggcatatt tttgtacca gcagaccaga agagtccaga cgggaaacta cgcgttctgt 300



atgaagtctt cccgatgtca ttcctgatgg aacaagctgg aggccaggct ttcacaggca 360  
aacaaagggg gtgtttcagt ttcccggttct cagaccccaa tccccaactg aaaaatcttg 420  
atg 423

<210> 2982  
<211> 281  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-057-Q1-E1-E7  
<400> 2982

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ccgccgtgaa cgggtcccctc catgtcatcc ccaatgtcat caccgccgag ttccgcacct 180  
tcatcgagat cgtcttcgag aaccccgaga agagcacaaa ctccctccac gtctatggct 240  
aggccttctt cggcgtcggc gatgggcccc gggaagtggg c 281

<210> 2983  
<211> 431  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-057-Q1-E1-E8  
<400> 2983

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ggacaagctt tccggcgccg acgccgacgc ggaccccgcg ccgacacgat ccggtggatc 180  
aagtgcacat cacctttagg gagggccctt ggacagcagt ttgtgctgca aattctatat 240  
agctctgtcg cagcatggcc tcggtgggcg tggcacgctc ttctttggga tttcagaatg 300  
gcacaagttc tagcaatgac ccagatcgtc ttcccaacga gttgggcagt atgagcataa 360  
gggacgacaa ggacgttgaa gatattgtag tcaatggcaa tggggcgagg cctggtcata 420  
tcatagtgac c 431

<210> 2984

<211> 182  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-E9  
  
 <400> 2984  
  
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 catgcattgc cgatcgccga cgtaccatcg cgccaacgag agagagggat ggagatgatg 120  
 acgaggatcc tcagcgggtgc ggcgcgcgct gtcggcatgt cgggaaccgc ggtgggggcg 180  
 tc 182

<210> 2985  
 <211> 441  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-F1  
  
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 cgctcccccg cctcccaagg aaacttatct aagcattccg gcggtcgatc catcttcccc 180  
 tccagggaga gcaaggaata atcaatcaac cggccagtga aacgttagga ggaggaggag 240  
 agccggagtc cgtccagcgc ggcgcggggt gatcccttgc gtctccgccc ctgcccctgc 300  
 gcatggccca acagtgccaa ccaagcacat cggtcacggg tcagtcagcc acgggagaag 360  
 gcgcgacgat cgatatggcc aaaagtggac cgacagtaat ggccgcagca ggccggccgga 420  
 agcagcagtc aaattgtctg c 441

<210> 2986  
 <211> 416  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-F10  
  
 <400> 2986  
  
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aaattccgga gagcagttcc ttccgcctc cccatttcct ccg gatagat ttgggtttgt 180  
cctgcgtcga ttagtccggc gccgaaccc gcaccaatcc attcgccgag ggatcgagca 240  
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cttgccgcg tctccccctc cggccgatct ggactcgaca gatcattatt tttttgttgg 360  
catacattcc caaccttgat ataaagacct ccttcattca gaagcctgtg ttttgg 416

<210> 2987  
<211> 283  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F2

<400> 2987  
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cattccggcg gtcgatccat cttcccgctc atggagagca aggaatagtc gatgtacagg 180  
ggagtgtgac gttaggatga ggaggagatg ttgtgtccgt cgagcgcggc gcaggttgcc 240  
tcgttgcgtc gcaggcggtg cggcgtgaca gtggggagga atg 283

<210> 2988  
<211> 435  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F3

<400> 2988  
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attgggaggg agagcctcaa ggcgggggat catatctact cctggagggc ggcgtgggtc 180  
tacgcgcatac acggaatata tgtgggcat gataaggtga tccatttcac aagaggaaga 240  
ggacaggagg tcggaacagg aactgtcgtc gatattatc ttgtgagttc caccacaaa 300  
cgaagcaaca cgccttgccc ggtgtgcacc gacgaaacca gcgacagcag cacagagacg 360

aacggcggtgg tatcctcctg cctcagctgc ttctagctg ggggtgctct ctaccgtttc 420  
gagtacgcag tcaac 435

<210> 2989  
<211> 188  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F5

<400> 2989

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agctccaagg acggcgccgatg gtctctacac ctggacgggc agggtagagt caacgcatat 180  
tcaggaat 188

<210> 2990  
<211> 412  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
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<400> 2990

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tcagaaaaaa aagaaaagaa agagattgag aagcagggag aaaaaatggc actggcccat 180  
tgaggaagct tgagaaccag ttaacaagaa ttgccaacat attcttggac aatcttggtta 240  
acagagtttt aaggtttcnc ancagacatt ttctgagtcc aggaagagcg cgtgcaacca 300  
ccacattcat ataattaata agcaaggttc agagaaaaag caaatgggca caaagaatga 360  
ataaagggat cctgaagccg ttccgccata tctcaaccat catggatggg aa 412

<210> 2991  
<211> 334  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F7

<400> 2991

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cggttcggc cgcagcttct acaaggactg ccgcacgag tcggtgggtca aggaggtggc 180

ggtgctgacg gcgcagcagc gttccaagtc catcgagggc gccatcgaca ccggcttctc 240

gttcaagaac tgcagcatcg ggggcgtcaa gggcggccag atctacctgg gccgcgcctg 300

gggggactcc tcccgggtcg tctactcgta cacg 334

<210> 2992

<211> 86

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F8

<400> 2992

tactccctat agtgagtcgt attaagtcgc agcggcgacg gggggcggcc ggcggccgcg 60

acgtccgttg tggcgccgt ggggcc 86

<210> 2993

<211> 316

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F9

<400> 2993

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caagacctac tacctggacg ccgccgacaa cctcggcgcc tgcaagcgcg ccatcggtt 180

ccgcgacgcc gtcacatcc gcgccacgat tagcatggtg gcgcaggaca cgcataactg 240

cgacgaggag ttcataaacg ccgtctcaa gaaccgcatg gaggaccaca acaggtcgct 300

catcgagatg tccgag 316

<210> 2994

<211> 421

<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-G1

<400> 2994

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 ctgctttacg ctgtgccga gaaatgattg gggtaacga tggatccaag aacttgatcc 120  
 gtgctattaa caacaggctc agtgctctgt catttcacat caggagtagt tattgggttg 180  
 atatgaagaa gataaatgag atttatcgct ataagactga ggagtattcc catgatgcta 240  
 ttaacaaatt caacatctac ccagagcaaa ttccatcttg gcttgacagac tggattcctg 300  
 tgaaaggcgg ttaccttata ggcaatctgc agccagctca catggatttc aggtttttct 360  
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 t 421

<210> 2995  
 <211> 133  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-G10

<400> 2995

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 ggcattgccg cgt 133

<210> 2996  
 <211> 435  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-057-Q1-E1-G11

<400> 2996

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aacaactccg tgtcactggg tttgcgaatt gctgatttct ctgggtcatgc aagaaatata 180  
catttctctct tctacttgga ctctgataca gctatgtctg tagctgctga aatgggttgaa 240  
caattggagt tagcggactg cgacgttact ttcatgtctg attttattga ctttttgata 300  
gtgaatctta ttccgggttg gagacctgta aatgatgcag cagcgaactc gtataggcga 360  
tctgaaagtg aacttgcagt caattcncat cagaacatct caaagttggg acctgattat 420  
gcattaattg atggg 435

<210> 2997  
<211> 430  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-057-Q1-E1-G12

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gtggccaaag gcgcagtgtg cttggacggc agcccaccgg tgtaccattt ctctcccggc 180  
tccggttctg gcgccaaata ctgggtcgtc cacatggagg gaggagggtg gtgcaggaat 240  
cctgatgagt gtgctgtccg caagggcaac ttcaggggct cctccaaatt tatgaagcca 300  
ctctcgtttt cagggatatt angcggcaac caaaaatcca atcctgattt ctacaactgg 360  
aatagagtaa agatcagata ctgtgatggg tcatcattta ctgggtgacgt tgaggctgtg 420  
gacactgcga 430

<210> 2998  
<211> 187  
<212> DNA  
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<223> Clone ID: LIB148-057-Q1-E1-G2

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187

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<213> Zea mays  
  
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ctccgcccac cagaaagaca tccacgtcct cggcagcgtc gacggctcca gcgacggcag 180  
cagccccgag tccgaaggcc gcgtcgtcta cgcgacatg aagctggctg atacggaatc 240  
cgatgcgccg gcgcggcgcc cggcgccggg gccgtcgtcc ggttgaactg agaagcgtgc 300  
gtccagccaa gcaaggtggt caaaaccgag aactaattaa gggctcgatc gtgtgtcagg 360  
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atgca 425

<210> 3000  
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<212> DNA  
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<223> Clone ID: LIB148-057-Q1-E1-G4  
  
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ccatcatcag ccagggcaac cgctacatcg cgccgcccac ccttgccgag aagcaggtca 120  
ccaagcagca tgacacgccg gagtcggtgt ggaagaactg ggtgtggcac tccgagaacg 180  
acctcttcat ggaaggcgcc tacttcaccg tcaccggcgg ccagatcaac aggcagttca 240  
acaagaagga cctcatcaag cccaggaacg ggtcctacgt caccaggctc acgcgctacg 300  
ccggctccct cgctgcacg cccggcaagc cctgctagat caagccacca gcgaggacgg 360  
ccgacgacca gaagcagacc atgcattcgc cggctcgcca tgtaagaaac agggga 416



<210> 3001  
 <211> 428  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
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 cagaatgcaa ggctcgagttt gatgagagtg gaaaagcgta tggagtcact tctgaagggg 180  
 agaccgcaa gtgcaagaag atcgtctgcg atccttcgta tttgccagac aaggtgaaga 240  
 aggttgaag ggtggcccgc gcgatatgca tcatgaagca tccgatcccg gacaccaagg 300  
 actcgcactc cgtgcagatc atcctcncca agaagcagct aaagcgcaaa tccgacatgt 360  
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 tctccacg 428

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 <211> 309  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-G7  
  
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 ttggtggtat tggtaaatacg tatgggggtca cttctgagcg ggagaccgcc agatgcatga 180  
 agatcatctg cgatccttcg tatttgccat gcaaggtgaa gaaagttgga aggggtggccc 240  
 acgccatatg catcactaag catccgatcc cggacaccat tgactcgcac tccgtgcaga 300  
 tcacccctcc 309

<210> 3003  
 <211> 427  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-G8

<400> 3003

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gaaggggtcc gacacatacg agcccctgaa gcactcctgg ggcgccatct ggaggaagga 180  
cagcgacaaa ccgcttaagg gacccctcac cgccgcctc actaccgatg gaggcaccaa 240  
gtccgtctac gacgatgtca tccctgccaa ctggaaggcc aacaccgcct acaccgccaa 300  
ataattaact ttagtgctga caatacttta agccgaccta tgctagctat actagattgg 360  
gttggatccc aagcaatgca ttacacatgc atgcattgga ccgtgatatc tatttgctac 420  
cactacc 427

<210> 3004

<211> 408

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-057-Q1-E1-H10

<400> 3004

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ttgaaaagca ggaattgttg catactttcg ttaaccgcgt ggggtgtgttg gaagctgaac 180  
taatttctat gaagaagggtc ttgtatgaga cattggttcg gcaggatgag ctgcttgcat 240  
atattgacca acgacgggca gccaaatttt gtcggcagaa gttctgcttc tgagtgtctga 300  
agtacctgcc acctatgttc ttctattcgg agttggcatg ctgctattgt ggacacagaa 360  
tacttgcaaa tatcttcata ttttggttcg gtgtanagaa ttgcaata 408

<210> 3005

<211> 428

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-057-Q1-E1-H12

<400> 3005

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gagcccatth tgccggccgc gttgccctcc cccgtcgcgg cgcccgcccg ccgcggaag 180

ggtggtaagc gcaagatcaa gccatcagcg gcaacccatg aggattccaa catgatcccg 240

cgcaagcccg tcgaagcagt ggtgggtgggt aagggttaagg tggccaagga taccgtgtcc 300

gagtcantcg ctccaangcc cgccccgctc tccgcccctt agttgcgtgt tgggcgcccgc 360

tgcccgcccg gccccgggca acatgcgtcg tgtctgcgcy cgcacgcacg cattgaacgg 420

gagataga 428

<210> 3006

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-H4

<400> 3006

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tgtgttccac atgcaaggcc agagtacaca accgttgccc tacctgcagg caagagctgg 120

gcgacattag gtgcctggcg ctggagaaag tgcgcgagtc gctggagctc ccctgcaggc 180

actactcgct ggggtgcccc gagatcatgc cttactacag caagataaag cacgaggcgc 240

agtgcggcct gagaccgtac aactgcccct acgcccggctc cgagtgcggc gcggccggcg 300

acatcccttc cctcgtctcc cacctgaggg acgaccacaa ggtggacatg cacagcggct 360

gcaccttcaa ccacagatac gtgaaatcca acccgcgggga ggtggagaac gccacctgga 420

tgctgacggt gttccac 437

<210> 3007

<211> 62

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-H5

<400> 3007

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gc 62

<210> 3008  
<211> 413  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-057-Q1-E1-H6  
  
<400> 3008

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gctgctgcgg ctgcctgtgc tgggtgctgct gcttcctgtt gttcatcgtg gcggcgctgg 120  
ccggcacggc cgctacttcc ttcttcgtgt acaagcccaa ggccgcgtcc tactccgtga 180  
gcaacatgtc cgtctcgcag ttcgacttca gcacctccga cctgacgctg tacgtcaagc 240  
tcaccgcctc cgtgcgcgcc gagaacccca acgagatgat caccatcagg tacggcgagg 300  
gctcccacac cgtggtctcc taccgaggca cgccgctgtg ctccgggaag ctcccggcct 360  
tccttcaggg ctacangaac gtcaccgtca tggacatctc catggagggc cgc 413

<210> 3009  
<211> 447  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-057-Q1-E1-H7  
  
<400> 3009

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ttgatgtgtg gatccgtcgc ggctgccgtc aagcatagac accaagaacc agacctcggg 120  
gtggatcatc ggggtcgcgg aggtctactg gatggggtca agaagtatcc gggcaagtgc 180  
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cgagaagtgc aggtcgtcgc gacatatccc aggaaccttc ggacttggaa cgaagctgtc 300  
cataatatgg aaagcatgat tgggacgaag gtcgaatcaa ttctgaagct atgcgcaagg 360  
aagcttcggc tcagtagcag aaaaaggaa cgacctaaaa aggaaaaggc tatttagtcc 420  
tcgatagatt gtccttaagt caattgt 447

<210> 3010  
 <211> 435  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-057-Q1-E1-H9  
  
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 gaatctaacc aagaggtacc tgcattggcta ttgcgctatg cagctcgtcc ttcttatggg 180  
 ggtgggtggg gtgggaggaa cggcgatca gggggaggga gccgctttgg tggccgtgac 240  
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 ggtggaggca gcagtgggtg ttatgggtgg ggcgacacg gtggagctgg ggctccgagt 360  
 gcctgggatt gatgttacag ttgctcccaa gtagaggggt ctgccaaagt taggtcactt 420  
 ttactctag ttcta 435

<210> 3011  
 <211> 287  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
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 gtgtgctgct gcttccccctg cgtcatgggt gaggtcgcgg tgctcgccac ggtgcgcg 180  
 cccgcggcgc tgtgccgcaa ggccgccgc gtgcgcaagg gccgcaagg ctctgcctcc 240  
 gggggccagg ccacggagat atacgagctc ctcgtggacg acaccgg 287

<210> 3012  
 <211> 400  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A10

<400> 3012

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cgcaagcatt cgcattgttg gttcatgatg tcatgctatg atgcagcgtt catttaccat 180  
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gaggatggcg tgcaatggga cagggtgagg gcaccgcctg ttgacaccct tgcgcatcac 300  
ctgcacacct ctgactgcct gcatgatctc tggcccggcg accacatcga gattcagtgg 360  
agaacgaata gagaattcgc atacggtctg gtggtatgga 400

<210> 3013

<211> 279

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A11

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ccccgctgac tggaagttag gtgtcacgta ccaggcatcc aagaatttct aagtagccac 120  
ttttctctct cttcttcaac ctgcatatgc ccacaagcaa ccatgcagat gataacatgc 180  
atcatgcatg catattcatt ctttcgctca tgcattccga tatggtgccg gagttaaaaa 240  
aatgtaaatc aatgtgcaaa ctcaaagac atcttaacc 279

<210> 3014

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A12

<400> 3014

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atacagcatg ctaataacct tgagtgcacg tcgtgctcgt ctgatggcg acgacgtcc 120  
tctcggttcc ggaataccat atcaggtcgc aatgggcatg tgcacagtcg cctgcacggt 180

catcacagca gccgccacgg ccacagtggc cctcggttcg gaaggcacgt gcgcataggg 240  
 tgacgagctc ctccctcgggt acgtcaacgg gcgtcggcac attactgggt acctccgtgc 300  
 tcaccttctt cgcctactac ctgcagtaaa attaaaggag ggtcagatgg agatgctgct 360  
 ggctgccagt gcctgtattc ggttggattc cgttta 396

<210> 3015  
 <211> 290  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-058-Q1-E1-A3  
 <400> 3015

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 atgggaccta gaaccccaac gaggtgttcc acaacgtggc caaggtagcg ctggagtcgg 180  
 tccacacggc ggtcgagcag tccaagtcaa tcggcgatgc caatgccagc gactccatga 240  
 ccgagagcgc gcgcgatgac tgcaagatgc tcctggagga cgccgccgac 290

<210> 3016  
 <211> 335  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-058-Q1-E1-A4  
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 tcgtagccgc actctgggag gcatgtgggt tcgagccgcg gagggtaggg gtaggggcgg 240  
 gtttcagttg ttggcctggt gctgtatttc gcgtggtgat ggaatttaat ctcttcgggg 300  
 gcgacgggca tggttttaag ggaaaatttt tgggg 335

<210> 3017  
 <211> 280  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A5

<400> 3017

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gcgaccacct gatgtgcgag atcgacggcc agtacctcgc ggcggaggac atcgtcggcc 180

acgacggtgc cacctgcgcg cataacagag cagttccccg agttcaagac cgatgacatg 240

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A6

<400> 3018

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tccaacgccg gagegccttc ctacggcgcg gcggcgccct cggggggctc cgccgatgcc 180

cccgccggcg cctccgaggg ccctgcgagc gccagcggcc cgtctggtga cgacgcgccg 240

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<211> 280

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A7

<400> 3019

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ggcggcataa ggaagctccg cggcaacgat gacatctcca agtggaggca gctgtggcca 120

acagacgtcc tggagtaagc aggaaccgca tcccttctca caccgacatt gatccatcgc 180

tcaaatgaca cgcctttctt tcatcatcat attgacaaa ttcgtcgtct ctgtcgcgt 240



gttgtaaacg ggtagtaga agaacaatc ccgtagctg 280

<210> 3020  
<211> 272  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A8

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gatggcgccg gcctcctcct cgcccgccg cgccgcgtgc ctgcctcctgc tctgctcct 180  
gtcctcgcg gccgcctcgc cggcgacgag ctgcctccag gctaggcgtg ctctgtcaga 240  
tgaccatggg agcggatatag tggcgcgatg gc 272

<210> 3021  
<211> 417  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A9

<400> 3021

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gttgggttca tgatgtcatg ctatgatgca gcgctcagtt acgatttcca tacggacaca 180  
ttccgtgcaa ggtaccacc acacggtcga cgaaccgtgg tgttgaggga tggcgtgcaa 240  
tgggacaggg tgagggcacc gcctgttgac acccttgccg atgacctgca cacctctgac 300  
tgctgcatg agctccggcc cggcgaccac atcgagattc agtggagaag gaacaaagaa 360  
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<210> 3022  
<211> 315  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-B1

<400> 3022

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cgtcccacgc tccgtcttta tttgtaatct gaagcttaca ggaacatttg agtggatcat 120

ggacggattg gtaggcctct tgaaagtccg ggtggtgagg ggcaccaacc ttgcctaccg 180

cgacgcaaga ggcagcgatc cgtatgtcgt cctacgactt ggcaagaaga aacttaagac 240

gagcgtgaag aagagatctg tgaaccccat ctggcacgag gagctaacct cctggaaacc 300

cccgggggttt tcccc 315

<210> 3023

<211> 409

<212> DNA

<213> Zea mays

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<400> 3023

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cacgctccgt ctttatttgt aatctgaagc ttacaggaac atttgagtgg atcatggacg 120

gattggtaag cctcttgaaa gtccgggtgg tgaggggcat caaccttgcc taccgcgacg 180

caagaggcag cgatgcgtat gtcacatag gacttggcaa gaagaagctt acgacgagcg 240

tgaagaagag atctgtgaac cccatctggc acgaggagct aactctgacc gtcacagatc 300

gcagcctagc tctgaagctg gatgtgttcg acaaggacac gttcagcagg gacgaccgca 360

tggggggacgc ggagatcgac gtggcgccgc tggtggatgc ggcaaacgc 409

<210> 3024

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-B11

<400> 3024

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agcaggctga ccacgaccac ctggcgattc aggacctgca cgatttgctt acggagaggg 180

agaaagagtt gcttgacttg gacgctgagc tcgcgcactg caggaggctc ctgcagaacg 240  
 atccgttcaa cggcgacgga cgtaataatg gcgctgacac agtgaacaca acgattgacg 300  
 gcagaaatcc ggcgatcgaa tgcttggatg gcgcggacct tgtggggagc gccatgtcgc 360  
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<210> 3025

<211> 406

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-B12

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 cctccgcccc gccccgccct gcccaagctg agttccccca cccccaacaa acaattacta 180  
 gagtagctgc attggcgggg aaattaaagc gctagaagct cagcagcaat ggcgagcag 240  
 gctggcgctca gaaggtactg gtgccacatg tgcgcgcggg ccgttagccc cgcggatggc 300  
 gacgtggaga tgaagtgcgc gttctgccac agcggcttcc tcgaggagat ggagaccgcc 360  
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<210> 3026

<211> 359

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-B3

<400> 3026

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 ggaaaacacg tacattcacc cggcggcaat aatggcctcg gttccggctc cggcgacgac 180  
 gaccgccgcc gtcatectat gcctatgcgt cgtcctctcc tgtgccgagg ctgacgaccc 240  
 gaacctcccc gactacgtca tccagggccg cgtgtactgc gacacctgcc gcgccggggg 300  
 ttcggttttg aaaaccccc aaaaaaac cgggggggtt ttccccaaa aaaccccc 359

<210> 3027  
 <211> 300  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-058-Q1-E1-B5  
  
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 cccccaggc aagaacatca cggccaccta tggcaaggac tggctggacg ctaaagcgac 180  
 atggtatggc aagccgacgg gtgccgggtcc cgacgacaac ggtgggtggct gcgggtacaa 240  
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<210> 3028  
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 <213> Zea mays  
  
 <223> Clone ID: LIB148-058-Q1-E1-B6  
  
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 gagaggaggg gcaggaggag gccgcaccaa atctatctgg ggatcggagc gcgggcgaca 120  
 agatgccacg cggcgggaag cccgcgggtt cgtcgaagcc gaaccggttc gactcggact 180  
 cggactcgga gtccagcaat aagccggcga acaagtccgg ggcgtcgtcg taccaggccc 240  
 ccgccgacgc caagaagcgg tacaaggacg gggtccggga ctcgggcggg ctgggagaga 300  
 ccaggttcc cggggggg 317

<210> 3029  
 <211> 271  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-058-Q1-E1-B8  
  
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ccgtggaaac ccgcccacgc aaccttctac ggcgggcggtg acgggtccgg caccacggcg 120  
 ggcgcggtgcg ggtacaagga cacgcgcacg caggggtacg gcgtgcagac ggtggccgtg 180  
 agcactgtgc tgttcggtga cggcgcggcc tgcggagggt gctacgaggt gcggtgcgtg 240  
 gacagcccta gcgggtgcaa gcccgcgcg g 271

<210> 3030  
 <211> 372  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-058-Q1-E1-C1  
 <400> 3030

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 gcaacaactc agccgccgca accgccacat cagccatggg cgcctgcgca accaagccca 120  
 agacgcttga ggggcaggcc ccagctgagg ccgccgtctc cacaccaag gttgcgcccc 180  
 aggccactcc aatctccgtt gaggttgcggt ctgatgaaca ggtagctgag aagtggtgg 240  
 tggaggagcc ggctgcggcg gccgacgttg agcatcagaa ggctaagtgc gtgctcgctc 300  
 cagaggcggg ccgnttccgg nccccccggg gaaagggggc ccccccccc cgggggaaaa 360  
 aaaccccccc cc 372

<210> 3031  
 <211> 419  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-058-Q1-E1-C11  
 <400> 3031

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 gcaccaaatac tatctgggga tcggagcgcg ggcgacaaga tgccacgcgg cggcaagccc 120  
 gcggcttcgt cgaagccgaa cccgttcgac tcggactcgg actcggagtc cagcaataag 180  
 ccggcgaaca agtccggggc gtcgtcgtag caggcccccg ccgacgcaa gaagcggtag 240  
 aaggacgggt tccgggactc gggcgggctg gagaaccagt cgggtgcagga gctggagcac 300  
 tacgcggcgt acaaggccga ggagacgacg gacgcgctcg ccggctgcct gcgcatcgcc 360

gaggacatca ggcaggacgc cagcgacacg ctgatcacgc tgcacaagca gggggagca 419

<210> 3032  
<211> 416  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C12

<400> 3032

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caccgcgtc accttccagg ttggcaaggg atccaagcct ggccacctga tcctacccc 180  
caatgttgca accatatccg acgtggagat caaagagcac gggggcgatg acttctcctt 240  
tacgctcaag gagggcccgga cgggcacctg gacgctcgac accaaggccc cgctcaagta 300  
ccccctttgc atccgctttg ctgtcaagtc cgggtggctac cgcacgctg acgacgtcat 360  
ccccgctgat ttcaaggccg gcaccaccta taagaccaca ctcagcatct aatcag 416

<210> 3033  
<211> 313  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C2

<400> 3033

cctgctggta ccgctctaga attcccaggt cgacccaagc gtccactcgc ctctccatt 60  
gaccaacaat taagcctccc cgaccgccac atctattaag tgcagccatg ggtgcctgtg 120  
caacgaagcc taagacgctt gaggggaaag cccagctga ggccaccatc tccacacca 180  
aggttgacc tgagaccact accatccaca ttgaggttgc ggcaaacat gcagtagttg 240  
agaaggtgga ggaggacaag gaggaggcac taacagtggc ggcgaaacag gagccagcat 300  
ccaccattga gcc 313

<210> 3034  
<211> 275  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C5

<400> 3034

ccacgcgtcc gcatatatat attcctgcc aagataaaggt aatggagtcg tcacgcaggt 60  
tccagccggc cgtcatcctg cttctcctgc tcattgtgtc caccgatatg gcacaggcaa 120  
gggaatgcga gaagtacagt gagcgatttg ttggggcatg catgatcgca gacaactgcg 180  
ccaatgtgtg ccgcggtgag ggcttcttgg ccggcaggtg cagcaccttc cgccgccgct 240  
gcatctgcac taggcagtgc taaacaagat cgctc 275

<210> 3035

<211> 299

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C6

<400> 3035

ggtcaggaat tcccggggccg acccacgcgt ccagctcgaa gccgaaggcc tcgtgccttc 60  
tcttctctcc tggcatggag gaagtagctg ttctgcctat gatcgttgcc gccgtagtgc 120  
tggacaacaa tggcgctgac gcggtctcct gcaactgcat ccctagcgta acaataagcc 180  
tagaggagaa agaaaatatc aatggggatg ttcccacgat cacctcgcc gcaagcaacg 240  
aggaggaggc gttgttcagt gtcggagaat ccaccaagga cgatggccat cgctttgac 299

<210> 3036

<211> 300

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C7

<400> 3036

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cgtgagctcc tgtcagacgc ggcggtcggg agcaatccga ttctccgggt gatggccggc 120  
accgtcttca tgcacgaacg cgattacgcc gaggtcttca agcacaccaa ctccggtggc 180  
agcatggagc tgcttgcgct gaatgttcag atataccttc aatgaacag gacggaccac 240  
gcagagaagc agctcagggt gatgcagcag ctggacgaag accacacgct gacgcagctc 300

<210> 3037  
 <211> 458  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-064-Q1-E1-A12  
  
 <400> 3037  
  
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 gggagtaaag ggcgaagaaa gaaacccaaa gcaattgacg ggaatcggaa aaaggggtgg 120  
 atcacgtaaa ttaatccgat gtaaaccgag aaccttacct ctccaagaag gtgttgacg 180  
 gctgtcgaaa gaacgtgctg tgaagtgaga gaacgtacga gaaagccaag tgaggaaaag 240  
 aaggcaagta gagggcgggc cgagaaagga gagggcgtaa gacgtgatac agagtaggaa 300  
 gaaaagagaa gagagctaga aaggaggtaa aagaagagta aaaggactag aagaggtacg 360  
 gaattcacga ggaaggagcg tgaaggaagg aggaatccca agtaatcgag gaagaaaaag 420  
 cttcggtgaa agcgtgaacg gattttgtac acactgcc 458

<210> 3038  
 <211> 401  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-064-Q1-E1-A2  
  
 <400> 3038  
  
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 cgccctcgtg gcgttggtgt ctgccggcct cttcccgcag gcgttaggga acggcaaggg 120  
 caaggtgcat ggcggcggtg ccgtcaacct gctggttgcc ggcattctgt ctcgcgcccc 180  
 attcccagag gtttgcaagg ccacagccgg gcgccatgca tccaagtacc cggtcacgca 240  
 ccatttggcc gtgctgaaca tgcaggtggc cgcgttcgcc aagcgcacag cgcaggcgcg 300  
 gaagcacgtc gcggtggcgg cccgcactat tccaccgccg caggcacagg ccctcagaac 360  
 ctgcgacacg atgtacatga acacgcagga cgccatcgcc g 401

<210> 3039  
 <211> 395



<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-064-Q1-E1-A3  
  
 <400> 3039  
  
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 ctgatgcttc cccggtctca gctatcgggt ttgagggtta tgagaagcgc cttgagatca 120  
 cattctctga ggcacctgtc tttgtggacc ctcatgggagc tggtttgctg gccctctcca 180  
 gggcccagat tgactctggt ctggatcttg cacgggtgcac aattgtgtct gagctctcca 240  
 acaaggattt cgactcatat gtcctttctg agtcaagctt gtttatctat cctctgaaga 300  
 ttgtcatcaa gacctgtggc actaccaagc tcctgtctac cattccaaga atccttgagc 360  
 ttgctgaaga gctgtctatg ccacttgctg ctgtg 395

<210> 3040  
 <211> 412  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-064-Q1-E1-A4  
  
 <400> 3040  
  
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 ctgcatcgtg catggtgaga aggaagagtc aaagggcatc gatgcgaaag cgtccgggcc 120  
 tgggtgggtcc ttcgacatca ccaagttggg cgcctccggc aatggcaaga cagacagcac 180  
 gaaggctgtg caggaggcat gggcatcggc gtgcggcggc actgggaagc agacaatcct 240  
 catacccaag ggcgacttcc ttgtcggaca actcaacttc acaggccctt gcaagggcga 300  
 cgtgaccatc caggtggatg gcaatctgct ggcgaccacg gacctaagcc agtacaagga 360  
 ccatggtaat tggatcgaga ttctacgcgt ggataacctg gtcatcacgc gc 412

<210> 3041  
 <211> 391  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-064-Q1-E1-A5  
  
 <400> 3041

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cagccgttcc tgttcttgat aaaacgagag aaggatggca gtgtttcagg gagctgtcct 120  
attcttgttt ctctctctcg tcgcagcaga ggtgggaacc atcgatgcca aaatgggagt 180  
agccatgccc atgcatgcct tgataatgga gaaagcgaag cagcaggaga cggagaagaa 240  
ggaggagaaa agcacggaga aggaagagag tcaatgctta tcgccgagtc tccagttcga 300  
gggcttctgc ttcaacagcg acagatgcgc cgagggtgtgc atgaaggaga gctttcccg 360  
tggcgagtgc aagcgggacg tggccatgcc c 391

<210> 3042

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-A6

<400> 3042

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ataaccctgc gtgcccttcg ttctcgtctc gatcccgacg acgctccctt cggctccggc 120  
aaaccacatc aagtcgcgat ggagatgaag aaggtcgcct gcgccgtcct cgcgcgccgc 180  
gcctccgcca ccgtggctct cgcgcgcgag gccccggcgc cgcccccac cagcgctcct 240  
tcggcccgct tcccgccgt cggcgccgtg ctggggcgct ccgtgctctc cttcttcgcc 300  
tactacctgc agtaaaatta aaggagggtc ggaggagat gctgctggct gccattgcct 360  
gtattcgggt ggattccgtt tatatatata tttaagtact ttaatttggg tctgaacatg 420  
tccaa 425

<210> 3043

<211> 357

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-A7

<400> 3043

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agccagctcg cgaaaataat gaagagccgc agcatggcat catcggccgc gctcttggtg 120

ctagccctcg cgctagtggc ggccaccgcc ccacaggtag cggaggcaaa gaagaagaga 180  
gcgggcggaga gcggcgaggc ggcggaggcg aagaagatcc aggacgactt ctgctcgacg 240  
ctgtgcgagg gcaagaaggg gacggacctg gtcgtgtgca aggagtcttg cgcgctctcc 300  
cagcagtcca acctggtgct gtacggcagg atccagtgca agggcaagtg caccgag 357

<210> 3044

<211> 392

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-A8

<400> 3044

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catcatggtc gtgggtgtcg tccttgacgc gctcgtcgcc ggcgggtcat gcggggcccc 120  
gaaggtgccg cccggtccca acatcaccac caactacaac ggcaagtggc tcaccgccag 180  
ggccacctgg tacggtcagc ccaacgggtg cggcgctcct gacaacggcg gtgcgtgogg 240  
gatcaagaac gtgaacctgc caccctacag cggcatgacg gcgtgcggca acgtcccat 300  
cttcaaggac ggcaagggct gcgggtcatg ctacgaagtg agatgcaagg aaaaacctga 360  
gtgctcgggc aatccagtca cgggtgtacat ca 392

<210> 3045

<211> 406

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-A9

<400> 3045

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ccttcgttct tcctcgtctc gatcccgacg acgctccgtt cggtccggc aaaccacatc 120  
aagtcgcgat ggagatgaag aaggctgcct gcgccgtcct cgccgccgcc gcctccgcc 180  
ccgtggteet cgccgccgag gccccggcgc ccgccccac cagcgctctc tcggcgcgt 240  
tcccggccgt cggcgccgtg ctgggcgcct ccgtgctctc cttcttcgcc tactacctgc 300  
agtaaaatta aaggaggatc ggaggagag gctgctggct gccattgcct gtaatcgggt 360

ggactccctt tatagataaa attacgtact ttaatttggg tccgaa

406

<210> 3046

<211> 352

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B1

<400> 3046

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cccggggaca gccagtccaa catggtgacg gcgcaagggc ggacggaccc caacatgccc 120

acgggcatcg tgctccaggg ctgccgcacg gtgccggagc aggcgctctt ccccgaccgc 180

ctccagatcg ccacctacct cggccggccg tggaaggagt acgcgaggac ggtggtgatg 240

gagagcacca tcggcgacct catcaggccg gaaggggtggg cggagtggat gggcgacctc 300

ggcctcaaga cgctctacta cgccgagtac gccaacaccg gcccgggcgc cg 352

<210> 3047

<211> 459

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B11

<400> 3047

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aaaacataaa atatgtcttt tcttttagaa cttttaaaag aaattcgctg gagaggactt 120

tggggaactt ttcaagcagc caaaatgaat agactgggta caatgaagta ctttgtcggc 180

gaagacgagt ttcacaaccg atactttcaa aaagtaaacg atgttatgtt gaaggatcgt 240

tgggtggaat atgcttctaa ggaattcacc cctgacctt attcggtacc tcctgagtgg 300

catgcctggc tgcatcatat tatagatgag ccaccacaa aagtaggttt ccagagacca 360

aagtatcaag cacagatcgt cgcaaaccgt acaggcacia cagatgcgta ttttcccaag 420

aacaatcctc ttagtaagaa ctttaagggc ttggctaca 459

<210> 3048

<211> 481

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-064-Q1-E1-B12  
  
 <400> 3048  
  
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 gaagaggaaa acggtttgct gttggtatgt gactcgtaca acatttccaa aggaggggaa 240  
 gattatggga tagaagtaaa caacgatgaa gatgaagaag gaggaggagg aggagcagat 300  
 aatgcggtgg aacaagttaa tattgtgggc gagtcgtttg gtttacaacc ttttcccatc 360  
 agcaaaaagg actttcaagt aactatcaag cggttatagca aacgagtcaa ggactatttg 420  
 gagaagaaca accgataga gtggaaaagt ttatggaagg aatgaagtcg tgggtgcca 480  
 a 481

<210> 3049  
 <211> 409  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-064-Q1-E1-B2  
  
 <400> 3049  
  
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 agatcaaggc tggcaaaaca ttaagtgtc ggaaatggca ggctgcattt agtcccgatg 180  
 gctgtcttga tattgcctca gtcctaagcc ggatacaaag aggaggtgtc catccgacag 240  
 tcagaggaga ggtctgggaa ttcttacttg gttgtttcga ttccagaagt acctttgatg 300  
 aaagggaaga gataaggcaa atacggagga tacaatatga cagatggaag gaagattgtc 360  
 gacagatgga ttcgcatgtt ggtagcggta aagttatcac agcaccact 409

<210> 3050  
 <211> 425  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B4

<400> 3050

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ctcagctcag ctcagattca cgagctcgtc tcccagatcc agcttcgttt ggttgaattc 180  
tcttcttttg aagtgctggt gggcggcgtg gtttggtgct cttggggccg gcgtgtttct 240  
gcgtttctcc ggctatctgc ctgtcttgc gcggcctgcg gcggcggggt ggagatgggg 300  
gtggccgggg agaagttcca gctggggacg gtggggggcg tcagcctctc ggtggtgtcc 360  
tccgtctcca tcgtcatctg caacaaggct ctcagagct ccctccgctt caactttgcc 420  
accac 425

<210> 3051

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B5

<400> 3051

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gcaagtgcaa gcgcaaggca gacagacgcg gcgagaagga gagcagagaa gcccgggtgcc 180  
acatccgtgt ggctgcggc cggcggcgcg gttaccaacg ctcgtcgtc taaggatgtg 240  
gccatcaggg cagcaaaatc gccatccagc gccgcgcaca agacgaggcc tgctggtgtc 300  
gagaaggcag cagcgtcttc tgctgtaaag ctgatgacga tgcctcagaa aacaatggca 360  
ggagctggaa aaagtcaagc tgcacctccc gcccg 396

<210> 3052

<211> 398

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-064-Q1-E1-B6

<400> 3052

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tttcacactt cctgcctttt aactggact attctgtgcc aatagagat gctgaacgat 120

gaaatagcta ggaaggggaa gagcaaccga ggaaggaagg caaagaatgc acctaggaga 180

agcaaaataa cgtccatagt ttgccagaa tgtcagggtta ctggaattca cgtcaacgga 240

gatgaacttg agaagccaag cttttcttta tcagagatgt ttcgcttcaa gatgaaagca 300

atcgaagctc acaagcatg gctgaagaga cctgaagtgc ttgaaaactg ttccactggg 360

cttcatttcn ctcagaaca tgtggagaac tctgagga 398

<210> 3053

<211> 267

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B8

<400> 3053

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ccgccacatc agccatgggc gcctgcgcaa ccaagcccaa gacgcttgag gggcaggccc 120

cagctgacgc cgccgtctcc aaaccagggt tggcgcccga cgccactcta atctacgtta 180

aggttgcgtc cgtccataat ttgcctagac tgtcagcgta ccgcaattca tgtcaagcga 240

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<210> 3054

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C1

<400> 3054

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tgcgcgcg cctcgccatc gtcttcgagc tcttcgtggg aaactcgacg gccgcgttcg 180

ccgcgcgcg cggtacgc ctggccacgc ccgtggccgg ctcctcgcg tacgacgcgt 240

cggcggggcc cgacgcgcgc gtctcgctcc gggcgctcgg cgcgccggtg cgcgtcgagt 300  
tcaaggacga cctgtcggcg gcggcggctc tggacaaggg gttcgagtcc gacgccacca 360  
ccgcgcggtg cgtgacgttc gcggccagcg ggg 393

<210> 3055

<211> 483

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C12

<400> 3055

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acacacgtta accttggtcc attactacta ggaatgaccc ttcgtaaacc agtctttacc 120  
aaagtagaaa aactacaacc cgggacacag gggcacaact tgatcgttca agtgatgaac 180  
gtcggtgagg ttatggaaaa agtgagaccg agtggtgaca aactgcaaact cgccgaagtg 240  
ctacttgtag atgaaactgg agcgggtatta ttacagcaa ggaacgaaca aatcaaactt 300  
tttaaaaagg gagagtgtgt gaccgttcga aacgcaaaag tcaatatggt gcgaggcttt 360  
attcgtttag tagttgacaa atggggagct attaagccgc ctggaccaac ggaaaagtta 420  
caaggaccac caaaagtaga aaacaatatt tccaacatag aatatgaact cgtgtaagac 480  
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<210> 3056

<211> 408

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C2

<400> 3056

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gctcggcttc cccggttctt gagaggggaa agatgacgcg gacgatatgg atggggaggg 120  
acgacaggtt ccagtggtg gaggccgcgc tcggcgctgg ggtcgccgcc gccttcgccg 180  
ctgggctcgt cgggggtttac ctttccatgc cggactccga ctacagcttc ctcaagctgc 240  
cacgtaatct ccaggaactc caaatcctca ctggccatct tgagaactat actatcgact 300



acaccctaca cgtgttggtg ggctactgcc ccgtgtacat cttcatgcag accttcatga 360  
tcccaggaac gatattcatg tcaactgcttg ctgggtgctct gtttgggc 408

<210> 3057  
<211> 349  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-064-Q1-E1-C3  
  
<400> 3057

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ccacaatcat ttcaggcatc atcgacacaa gttactatac actccacatc gtgggcgacc 120  
accaggatga gcaccagcac agaatgggcc aggagcacca cactaagggc caggaccacc 180  
acaataagga ccacggggag cacaaggagg gcatcatgga taagataaag acaacatgac 240  
ctgcgagcta ccgaacttct ccggcaacca caaggacaaa aaccatacgg agaagacagt 300  
tcagaacacg tagacataga cgatgcacgg cgaaggccaa gaccatggt 349

<210> 3058  
<211> 400  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-064-Q1-E1-C4  
  
<400> 3058

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ccaccgatct cacgctctct ctcttctctc gtcgcgtcgg cgtcgccatc gccggccatg 120  
ggttgcggtg gctccaagga ggccgtggcc accggcaaca ccagcgccgg cagcaaggtc 180  
ctccggagga agtctctctc cgtctccacc ggcgcaagcc acacctccac cacgtcgccg 240  
tcgtctctcg gcgtcgtcgt caaggacgtc gtgaaggatg cggcggcggc cggcgagggtg 300  
atgacgcccg ccgacgccga gaaacctatc tctgtcgacc ccaaggcaga cgccatcgtg 360  
gtgatggacg ccaagaaaga ggagggcaac aacaagggtg 400

<210> 3059  
<211> 445  
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C6

<400> 3059

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ccgaccacaa ggaggaggaa gccgtggaga agaccgtcgt cgaggaggag aagccagcgg 120  
cagcagccca tgcagaggaa aaggtcgcca ccgccgccga gaccacgacg acggtggagg 180  
cgaagaagaa cgccgaggag gccgggaagg agaagctggc gcagcaaagc tgatcgactg 240  
tccgtgcatg cgtgcccaatt aatataattg gctgatgatg cctgatgttc agtgtgtgat 300  
actgtgatca agcaaggaga cgacacttga attctctaca gtttggcata ggtcggggaga 360  
gacactctcg accggccaca ccatgtaaca aactaacctt cgatgtctcc caataatttc 420  
ctcaacggag ttcttctgat gaaac 445

<210> 3060

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C7

<400> 3060

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taccaacaac agcagcagca agcccacccg ttcgacgaca tggcccgccct cggcgccggc 120  
gccgtgttgg cgctcctagt ggcggtcgcg gcggtggccg cgttcctcgc ggtgccggcc 180  
tcggcgaagt ccggggagct gagcgcgatg gggttgctgg cggcgaaggg cggcagcggc 240  
gcggggccgc agaagtgctc gggcgcggtg ggcgagtgcg acgtggacga ggcggaggag 300  
ctcgggctga gcggcggcgg cctcggctcc gacgacgcgg tcgggcggac gctggcgcag 360  
cggaagccga ccaaccggta catcagcta 389

<210> 3061

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C8

<400> 3061

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aaaatcgccct catcgaccac gcccccttcc aggctcccgt ctccatgggt ctccctctcaa 120

acaggattgg gagggagagc ctcaaggcgg gggatcatat ctactcctgg agggcgggcgt 180

gggtctacgc gcatcacgga atatatgtgg gcgatgataa ggtgatccat ttcacaagag 240

gaagaggaca ggaggtcgga acaggaactg tcgctgatat tattcttctg agttccaccc 300

caaaacgaag caacacgcct tgcccgggtg gcaccgacga aaccagcgac agcagcacag 360

agacgaacgg cgtgggtatcc tcctgtctca gctgcttcc agctgggggt gct 413

<210> 3062

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C9

<400> 3062

gacccacgtc gtccacagcg tcctcgatcc tcaactgagaa aggttactcc ttcaccacct 60

ctgcggcacg cgaaattgtg ggagacatca acgctcagct tgcatatgtg gctcttgaat 120

acgacgagga gctcgagaat gccaagagca gctcatcggg ggagaagagc tacgagctgc 180

ctgatgggtca ggtgatcacc attggggcag agagggttcag atgccctgag gtccacttcc 240

agccttcctt cattgggtatg gaagctcctg acatccatga taccacctac aactccatca 300

tgacgtgcca tgctgacatc atgaatgact tgtatggtaa cattgtgctc agtgggtggca 360

ccaccatggt ccttgggtatt gcggaccgta tgagcaacga gatgactgcc c 411

<210> 3063

<211> 389

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-064-Q1-E1-D1

<400> 3063

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cactgaaccc aataatccga tcccacagaa acttttctct cggtccgttc gatcgatcgc 120

tgccgtgtcg tttgccagac accatcagca cccaaaacca tggcctgcaa cctgggtcag 180  
 tgcgccaccg ccgccgcggc gaccgtcgcg ccccgacccc ctgcacctgc tgcgtccgcg 240  
 tccgtctcct tctccgcgag gaagccggcg ggcggcagcc tgcggctgca gcggcaggcg 300  
 tgctgcgagc cgtcgggtggc gccgtcgcg gcggtgttcg cctgcggggc cgcggcgctcg 360  
 gggagcgcg cgcacctggc ccccggggg 389

<210> 3064

<211> 398

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D10

<400> 3064

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 cacaacctcg attggaccgt catacaggaa atgggtttac agtgacgctg ggaagagtga 120  
 gggaatgttc cgtgatggac ataaagtgg tattgtttgg acataacaca gtggtaggag 180  
 ctgcgggtgg ttcgattatt actgcaaagt tgagtgtcgc caaagggttt attgcacaaa 240  
 aaggaaaaca aagtgtatat gcggcagtat ctgcacta gtgtgtgtca ctagacagaa 300  
 tagtgtgttt gtgttgtttg tgtctgtgtt ttccaatgaa agacattgac cactagaact 360  
 atgtgaaaaa aaaattacag tcaaccacaa agactatc 398

<210> 3065

<211> 372

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D12

<400> 3065

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 acatcatcaa atgtgtcagc ggaggtatag aatgattcgc catcgattta cgccatcatt 120  
 acgggtacag caccagattc taaaagatt ataggggatt ctggtcagga cgctacgttg 180  
 aacggaactg gtaccgagaa agactacaat gttgactatt catgttcttg tcacatcctg 240  
 taagttcagt ttgatacttt ctatctctgc gcatgatact cagcagctat actggttatg 300

cgcagcatga tcgctacttt tgttaactcg gcagccgcta cagatgatac aagcttacct 360  
acgcttgtat gc 372

<210> 3066  
<211> 388  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D2

<400> 3066

gggtcgagcc acgcgtccga ggcacgtgcg tgcgtgcgta cgtacgcagc ccagggacac 60  
cgaccgccgc cgccgcccgc agctcctcct cctcctccga ccctctcatc aaccgcacgt 120  
acacgtcctc gctccatggc gggcatgccc acggaaagcg cgaccggcg cttcgccgcc 180  
gcgtgcggcg tgctcagcca gtacgtccgg acgaccggcg cgcccgcat gacgccgccg 240  
ccgccgttcc tgaagccacc agccgccgcc caggagacga cggtcgcgcc gcgcacgcag 300  
cagctgacca tcttctacgg ctggaggggtg gtgggtgctgg acgcctgccc ggccgacaag 360  
gcggacgagc tgatccgcct cgccgcct 388

<210> 3067  
<211> 359  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D3

<400> 3067

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ggcaccatcg acgggcaggg agccctgggtg tggaacaaga acgagtgccg gcgttcctac 120  
aactgcaaaa tcttcccaa cagcctgggtg ctggacttcg tgacgaacgc ccagatccgc 180  
ggcatcacgc tgctgaacag caagttcttc cacatgaaca tcttcgggag caagaacgtg 240  
gtgatcgaca aggtgacgat caaggccccc ggcaacagcc ccaacacgga cggcatccac 300  
atcggcgact cgagcaacgt gaccatcagc ggcaccacca tcgccgtcgg cgacgactg 359

<210> 3068  
<211> 396

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-064-Q1-E1-D4  
  
 <400> 3068  
  
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 cagcttacca acaacagcag cagcaagccc acccggttca cgacatggcc cgcctcggcg 120  
 ccggcgccgt gttggcgctc ctagtggcgg tcgcggcggt ggccgcgttc ctgcgggtgc 180  
 cggcctcggc gaagtccggg gagctgagcg cgatgggggt gctggcgggc aagggcggca 240  
 gcggcgcggg cccgcagaag tgctcgggcg cgggtgggcga gtgcgacgtg gacgaggcgg 300  
 aggagctcgg gctgagcggc ggcggcctcg gctccgacga cgcggtgcgg cggacgctgg 360  
 cgcagcggaa gccgaccaac cgttacatca gctacg 396

<210> 3069  
 <211> 426  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-064-Q1-E1-D5  
  
 <400> 3069  
  
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 acaggcccat gcaagggcga cgtgaccatc caggtgaatg gcaatctgct ggcgaccacg 120  
 gacctaagcc agtacaagga tcatggtaat tggatcgaga ttctacgcgt ggacaacctt 180  
 gtcatcaccc gcaagggaaa gctcgacggg caggggccag ccgtgtggag caagaactcc 240  
 tgcgtcaaga agtacgactg caagatcctt cccaactcgc tggatgatga ctctgtgaac 300  
 aacggggagg tgtccgggat cacgtgctc aactccaagt tcttcacat gaacatccac 360  
 aagtgaagg acatgctgat ccaggacgta aatttgacgg cccccggga acgtccccac 420  
 acggac 426

<210> 3070  
 <211> 403  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations

<223> Clone ID: LIB148-064-Q1-E1-D6

<400> 3070

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gcagtacagc gagtacaaga actgggtgtg gaagtcgcag gacgacctgt tcctcaacgg 120  
cgcctttcttc aaccagtccg gcggccagaa cgagcgcaag tacgacaggc tcgacctcat 180  
ccaggccaag ggcgccagc acgcccagtc gctcaccagg tacgccggcg cgctcaactg 240  
ccgcgtcggc aggaagtgtc agtgcggtgtg cagctctagg ctgcagcttt catcattggc 300  
gatcgatcgt aacaatgcaa ggttgtgttg tatataactc ttgtgtttgg aatgccgccc 360  
gtaattaatg gtcaactcta acactgcttg cctttaanaa aaa 403

<210> 3071

<211> 386

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D7

<400> 3071

aattgccggg tcgaccacag catccgaaag aagtcgccta attctttcga tcgaattagg 60  
cgcctttcttc gtcccacgct ccgtctttat ttgtaatctg aagcttacag gaacatttga 120  
gtggatcatg gacggattgg taggcctctt gaaagtcagg gtggtgaggg gcatcaacct 180  
tgcctaccgc gacgcaagag gcagcgatcc gtatgtcgtc ctacgacttg gcaagaagaa 240  
acttaagacg agcgtgaaga agagatctgt gaaccccatc tggcacgacg agctaactct 300  
gaccgtcaca gatcccagcc tagctctgaa gctggagggtg ttcgacaagg acacgttcag 360  
cagggacgaa cccattgggg acgcgg 386

<210> 3072

<211> 235

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D9

<400> 3072

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gtggaagaac atgaatgcac agaagaatgt aagaaatggt tagagtaaca accatgaagg 120  
aagtaaaacc gggaatctga gaggaggaaa gccagagtgg aactgagaaa aggtccacac 180  
acgagaagtc accaatgggg acaattgggc catgtacacg gaagtatgac ccaat 235

<210> 3073  
<211> 262  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E1

<400> 3073

acgcgtccag gcaatggctt gcctggctctg atgatgacct tccttttgca tgcattgatg 60  
gtatctcatc cttgatgatg atctagctca ctagtctctt ttaatttcgg cttcattcgc 120  
ttttccaaat tcgatttgtt ttcagccaag ttgttttagcg ggacatctct tgtctgatct 180  
tctgtctaaa tagagttgga ctcttatata tagaggcctt ccggcacata taatatacgt 240  
cggaccaata ttattgtgat ca 262

<210> 3074  
<211> 384  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E3

<400> 3074

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cggaggctcc ggctccgggc cccaccagcg gctcctcgcg cgtcgcgccc gccgtcggcg 120  
ccgccctcgg ggccgccgtc gcctccttct tcgcctacta cattcagtga gccggccgcg 180  
gccggctcgc cggaggccga ggaagagacg aagcgggaga gagagtgaca tggctgcgcg 240  
cattccgatg cgtgggcatg tttttgattc gacacacctt ttgtcctctt tttctttgtt 300  
ccctctttct ccttaattta acgaattgat gcatgccgct gatgttcttc cccctgagag 360  
agggattaac acttgatca tcgc 384

<210> 3075  
<211> 205  
<212> DNA



<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E5

<400> 3075

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cttgctcgac tgagcatcag gctgtagggc tctttgtgat catcttttgc cagttttctt 120

cttgtagcag aagttgttgg gcatggaact cctgttcctt tcaccaatag aagcataatg 180

atcagcactg tgaaacattt tttcc 205

<210> 3076

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E6

<400> 3076

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acggcctctc ctgctatcgc tgctggtcgc cgtgctagcg gtggccgcgg atgtcgccaa 120

cgccggccac gccaaagccc tgacgcctgg cgggcgcgtg gtacaccaca accacggcaa 180

gttcacggcc gggccgtgga aaccgcacca cgcgaccttc tacggcgggc gggacgggtc 240

cggcaccacg gcgggcgcgt gcgggtacaa ggacacgcgc gcgcaggggt atggcgtgca 300

gacggtggcc gtgagcacgg tgctgttcgg cgacggcgcg gcctgcggcg ggtgctacga 360

ggtgcgctgc gtggacagcc ccagcgggtg caagcccagc g 401

<210> 3077

<211> 394

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E7

<400> 3077

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gtggtgagcc cccgcgggag acgtgtgtcc cgttgctttt ccttcgcttc gacggccagg 120

ccacctgttg gcctcgcagt gctctgcctc ctgccaagca tccaagctcc ctctcgcccc 180

gcggcccagc gccgcggcgt ctatatagag ccagatccgc gcgatccccg ccaatcggca 240  
atcgctgcac cctgcctcaa cttatctagc tcacccgcat ccctgctcgg cactgccttg 300  
tgccttctcc tcgcacttgc cttcttcttg tatctagccc cccttcatca caatcaccgg 360  
cagcggcgcg ccgtcgtctc aggtgagagc tcca 394

<210> 3078

<211> 400

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F1

<400> 3078

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ttgccattag ctgtcgcgtc agttacgttt tgcttgccct gttctcgttc ggccttgaca 120  
acccggaaat cctccagccc tctagtcccc aacgacgcag gaagcaggat cgagccgaat 180  
cctccggaac tcgcgcgcgg ggccaaccga cctcacacta ttgatcgagg atgtcgtacg 240  
cctacctctt caagtacatc atcatcggcg acacaggcgt ggggaagtca tgcctgctgc 300  
tgcagttcac ggataagcgc ttccagcccc tgcacgatct caccatcggc gttgaatttg 360  
gcgcccgcgt gatcaccatc gacaacaagc ccatcaaact 400

<210> 3079

<211> 398

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F12

<400> 3079

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ccggcgccgc cgaggaggac gccgtggctg cgactgcgac tgcgcctgcg ccggcgctcg 120  
cgtcggcgtc ctttgggctc ttctccgggg agttcctccg ccggcacggg ctgcacctcc 180  
tgggcacgtc ctgcacgtgg ttctgctgg acatgcctt ctactcgcag aacctgttcc 240  
agaaggacat cttcagcgcg gtgggggtgga tccccaaggc ggcgacgatg aacgcgctgg 300  
aggagctgtt cagcatcgcg cgggcgcagt ccctgatcgc gctgtgcggc acggtgcccc 360

gctactggtt cacggtggcg ctgatcgacg tgttgggg 398

<210> 3080  
<211> 403  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F4

<400> 3080

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gccatggacg tggactgcgt ctcgctgccc gacgccccgg cgggcgacgt ggatggcggc 120  
gccgccccggc cgtggcccaa ggccgtcacc aacggcggcg tccacgagct gctggagtgc 180  
cccggtgtgca ccaactccat gttcccgccg atccaccagt gcccgaatgg acacacgctg 240  
tgttccacat gcaaggccag agtacacaac cgttgcccta cctgcaggca agagctgggc 300  
gacatcaggt gcctggcgct ggagaaaagtc gccgagtcgc tggagctccc ctgcaggtac 360  
tactcgctgg ggtgcccgga gatcatgccg tactacagca aga 403

<210> 3081  
<211> 391  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F5

<400> 3081

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tatcatggct accgtttttac tcagaagcaa aggtgttggt ctttgtatat ttgtgggtacc 180  
ctaagacaaa gggaactacg tatgtttatg gaactttctt taagccatat atttctcagc 240  
atgagaatga aatcgaccga aatcttcttg agctcagagc tcgagccacc gatatgggtg 300  
tcctttactt ccataaggct gcttcggtag ggcaaaatac tttctttgac gttttaaaat 360  
atgttgctgc ccagtccect tctcggaat c 391

<210> 3082  
<211> 414  
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F6

<400> 3082

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ggggggcgggc cggccgcgggt gcgctcgtec gcgcccgcgc ccgcgcgcgtc cgcgcgggcgc 120

tacggccccc gagccagtgg tccgtcgga gctggcgggg ccgcccggcg cagcagcagc 180

ccgagtaccc ggacaaggcg gacctggaag acgtgctgcg gacgggtggga acgttcccgc 240

ccatcgctctt cgccggcgag gcgcgcaccc tcgaggagcg cctcgcgag gccgcgcgtcg 300

gccggggcctt cctcctccag ggcggcgact gcgccgagag cttcaaggag ttcaacgcca 360

acaacatcag ggacaccttc cgcgtcctcc tgcaaatgtc cgttgtgtc atgt 414

<210> 3083

<211> 362

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F7

<400> 3083

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tgctcagga catgatcgcc gataaccacc ggctcatcgt gttcacatcc aagaaaggga 120

agcaggggac ggaggggctc gcgtaccagt gggactacgt cgtggaaacc caatacggga 180

gcgagggcat ggcggatggc agttgcccga agcggaccga gtcgaagccc atggactcta 240

aggcccagtc actagtgtg ctgaatttct tcaccagcaa cccgagccaa agctgggcct 300

gcagcaacat ctccgcgcg ctcacagca tgcttaacgc ctgctaccac gcctccgcca 360

aa 362

<210> 3084

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F8

<400> 3084

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 gcgtcacagc tgccgtgctc ttctacatcc tcgccgttgc tgccctcagc gcggccgagg 120  
 ccccggcaga gtcaccgaag gaaggcagtg ctgccaaggc acctgagtct gccaaagagaa 180  
 ctgctgcccc cgctgaagca ccgaagccg catccacccc cgtcgccgcc gctgccccat 240  
 cgccgtcgtc taggaagtct ggtccagcta ccgcgccagc caccgcctct acacccccctt 300  
 cttccacgga cgaggagttg agcccttccc cgccagcatc caccgccgcg gcgtcccctg 360  
 cggctgaggg accggctgct gatgactccg ccggtgctgc tgcc 404

<210> 3085

<211> 428

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-G1

<400> 3085

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 caagcgggag tacacgcagt acagcgagta caagaactgg gtgtggaagt cgcaggacga 120  
 cctgttcctc aacggcgctt tcttcaacca gtccggcggc cagaacgagc gcaagtacga 180  
 caggctcgac ctcatccagg ccaagggcgg ccagtacgcc gagtcgctca ccaggtagc 240  
 cggcgcgctc aactgccgcg tcggcaggaa gtgctagtgc gtgtgcagct ctaggctgca 300  
 gctttcatca ttggcgatcg atcgtaacaa tgcaaggttg tggtgtatat aactcttgtg 360  
 tttggaatgc cgcccgtaat taatgggtcaa ctctaact gcttgccctt gcctgcgggc 420  
 aaccaaca 428

<210> 3086

<211> 401

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-064-Q1-E1-G2

<400> 3086

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 aaaaatgtcg cgcgtcacag ctgcggtgct cttctacatc ctgccggttg ctgccctcaa 120

cgcgggccgaa gccccggcag agtcaccgaa ggaaggcagt gctgccaaagg cacctgagtc 180  
 tgccaagaga actgctgccc ccgctgaagc acccgaagcc gcatccaccc ccgtcgccgc 240  
 cgctgccccca tcgccgtcgt ctaggaagtc tgggtccagct accgcgccag ccaccgcctc 300  
 tacaccccct tttccacgg acgaggagtt gagcccttcc ccgccagcat ccaccgccgc 360  
 ggcgccccct gcggctgang gaccggctgc tgatgactcc g 401

<210> 3087

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-G3

<400> 3087

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 gggcaagctc cggatcgggg ggcgcgcgcg cggggccgcc gccgcgccca ttatattggg 120  
 ttagttaggc cagcttgtca ttgcatcgga gagatgtatc cggccactac gccctacgat 180  
 acggcgctccg ggggtgggct ggcgcgggtg gccggcttgt tccccgtcgc cggagaggcc 240  
 agggagtggg cgtcgaggct cctggactgc ttcgacgact tcgacatctg ctgcatgacg 300  
 ttttggtgcc cgtgcatcac gttcgggcgg acggccgaga tcgtgggaca ccgcatgacg 360  
 tcgtgcggga ctagegcagc gctgttcgcg ctgatccagt gg 402

<210> 3088

<211> 392

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-G5

<400> 3088

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 gagatgagga tggatgttct tctgatggaa aatcttttgt ttgagcgca tgtgacaaca 120  
 ttgtatgatt taaagggtc tgccagatca agatataacc cagactcaaa tggtagcgat 180  
 aaagtacttc ttgatcagaa cttaattgaa gcgatgccta catcacctat atttgtcgga 240  
 aacaaggcaa agaggctgct ggagagagct gtttggaatg acacgtcctt tcttgcttcc 300

atcgatgtaa tggattactc tttacttggt ggtgttgatg agaaaaggca tgaacttgta 360  
atgggtatta tagatttcat aaggcaatat ac 392

<210> 3089  
<211> 202  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-G7

<400> 3089

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ccgtacgacg tcacgaagaa cttcaacgcc gctgtccata gatctgtcat catcaatccg 120  
cgtgagaggt cggagaggcc ggggaatcac tttggagggg ggccaatgct tggctacgag 180  
ccctagcaac atgtgttggc ga 202

<210> 3090  
<211> 407  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-064-Q1-E1-H1

<400> 3090

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aatgcaagtt caagttcttg tggccgttgg aacatcattt ctaataaggg gtgcctgntg 120  
ttgtcctccc aaggtttccc cangaaagaa catcacaagc aactatggca gtgattggct 180  
aaatgccaaag gcaacatggt atggcaagcc tacagggtgcc ggccccgacg acaatgggtgg 240  
cggatgtggg tacaaggacg tgaacaaggc ccctttcaac agcatgggag catgtggcaa 300  
cgtccccatc ttcaaggatg gtctgggttg tggatcctgc ttcgagatca agtgcgacaa 360  
gccagcggag tgctctggca agcccgtggt ggtatacatt acagaca 407

<210> 3091  
<211> 373  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-H3

<400> 3091

ggtcctagat atccggtcga cccacgcgtc cgagcgagat gagcatggac attgtcaggg 60  
cgcgagctct ctgaagagga agacgcgcac ccgctcgcgc gatcgccatg catgccccgg 120  
aacgcacaga gcagtgctag ctgtttgtct tgcacatcgc accggcggcc tctgcatgta 180  
cccggtgtgcc gttttttgca ccgcgcgtgc cagtgttctc ttactccatg taaactactc 240  
tagacagtgc tcggtgagta cagctgctcg gtgagtacgg tgtcacagtc actccgtgta 300  
ggcagtgccca tttcgaagac aatattgcac aatttaactg gaaaccttaa caaagggcgg 360  
ccgctctaga gga 373

<210> 3092

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-H5

<400> 3092

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ctctgccct tatggggcca ccccgctgcc ttctccgttt caccgtcgac gtctgcggcg 120  
gccagcgtgt cccccgaag gccgctgctg aagcgaagga cccaccga ggcgccacct 180  
gcggtcgtga ggggtggagat cggggatgag gccgcggcgc tgcgcgaggc attggcgcg 240  
cagcaagcgg cgctcgccga cgtccaggcg gagctcgacg cggagcgcg ggccgcggcc 300  
ggcgccgcca gcgaggccat gaccatgate ctccgcttgc agcgcgagaa ggctgaggcc 360  
atgatggagg cagccagtt ccgcgcgtac gccgaag 397

<210> 3093

<211> 389

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-064-Q1-E1-H6

<400> 3093

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cggcgccccg caagccgggg tcgtgcgga cagtgggtgc caacgcggag ctcaaggtgg 120  
 tggacccgga caggggcctc tccctcgccc gcaacctccc cggcgagatc tgcattccggg 180  
 gcccgcagat catgaaaggg tacctgaacg acccgagggc caccgcgagg acgatcgacg 240  
 tccacggctg gctccacacc ggcgacatcg gctacgtcga cgacgacgac gaggtcttca 300  
 tcgtcgaccg cgtcaaggag ctcatcaagt tcaagggtt ccangtgcg cggcccgagc 360  
 tcgaggtccc ggctcttcgc caaccgtc 389

<210> 3094

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-H7

<400> 3094

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 tcgctaataa catcatggtc gtgggcgcgc tcttgccggc gcttgctcgc ggccgggtcgt 120  
 gggggccccc gaaggtgccg cccggcccca acatcaccac caactacaac ggcaagtggc 180  
 tcaccgccag ggccacctgg tacggtcagc ccaacgggtg cggcgctcct gacaacggcg 240  
 gtgcgtgcgg gatcaagaac gtgaacctgc caccctacag cggcatgacg gcgtgcggca 300  
 acgtcccat cttcaaggac ggcaagggtc gtggctcatg ctacgaggtg agatgcaagg 360  
 aaaaacctga gtgctcgggc aatccagtca cgggtgtcat cacagacatg aactaacgag 420  
 cctatcgctc cctaccactt cgac 444

<210> 3095

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-A10

<400> 3095

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 atcccgccgc cgccgtctct acggtcgcta ataagccgcc gcatccaggg atggagatga 120  
 agaagatcgc ctgcgccgc ctgcgcgcc cctcgccac cgtggcgctg gccgcggagg 180

cgccgggtcc gtctcccacc agcggtctct cgcgggtcgc acccgccatc gtcggggccg 240  
 ccgtggcctc cttcttcgcg tactacattc actgagccgc cggacgagga accgggagcg 300  
 gaggggaaga gaccaaggtg gggggagaga cttggctgcg ctgcgctgct ctgctgctcc 360  
 cgcgcattcc cgatgcgtgg gcgtgctctg attgggcacg gcggtggcag tggcacacct 420  
 tcgtcttctt tttgtttgtt ttttt 445

<210> 3096  
 <211> 413  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-065-Q1-E1-A12

<400> 3096

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 ctcaacgagc ttctgctccg acgacgatga cgcgccgcca cagccacatg gcggacgacg 120  
 ccgtcgccgc cggagcggcc gtttgetgcg caaggccggc ctgctgtct tctagcagga 180  
 agcagcagca gcagcccgc gacgcgggt gcggcagcag cagcagcgac gaccactacc 240  
 agcagcagct gatcatgctg aggcggacga ggagcgggcg ggcattcccg ccgccgatct 300  
 ccgtgatcgg caagggcggg cggcgtggc tctgcctgcg ggcgcaccgc gaggggtggac 360  
 gcctcgtgct gcggcagatg cccctgccgt cgcaggagct gctgcagccc tgc 413

<210> 3097  
 <211> 223  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-A6

<400> 3097

ggaattcacg ggacgaccac ggcgccgcca cgcgtccgga tcgatgcacg gaggaggatg 60  
 ctgccgtgct tctggcctaa tctactagtat aaagcaggcg gagacagcct ggccgcctga 120  
 ccgcagtgct ccccttctct ccccgctccc aaccacatgc cctgcctccg ccccgccccg 180  
 cctgccccaa gctcgattcc ccagccccca acaaacaatt act 223

<210> 3098  
 <211> 407  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-065-Q1-E1-B10  
  
 <400> 3098  
  
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 ccccgaaggt gccacccggc cccaacatca ccaccaacta caacggcaag tggctcaccg 180  
 ctagggccac ctggtacggt cagcccaacg gtgccggcgc tctgacaac ggcggtgcgt 240  
 gcgggatcaa gaacgtgaac ctgccaccct acagcggcat gacggcgtgc ggcaacatcc 300  
 ccatcttcaa ggacggcaag ggctgcgggt catgctacga cgtgagatgc aacgataaac 360  
 ctgagtgctc cggcaatcca gtcacggtgt acatcactga catgaac 407

<210> 3099  
 <211> 411  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-065-Q1-E1-B11  
  
 <400> 3099  
  
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 gccaggttcc cagccccggc ctacgcgcgc gaccccgccg ggtccacgcc gccgcaggcc 120  
 gacttcgtgt ggcggatcat cctgatgctg ggcgcgatgc ccgcggcgct cacctactac 180  
 tggcgcacca agatgcccga gacggcgcgг tacacggcgc tggttgccaа gaacgccaag 240  
 caggccgcgg ctgacatgtc caaggtgctg cagggtggaga tctcagccgg cgccgccgag 300  
 gaggacgccg cggctgcgac tgcgactgag cctgcgccgg cgtcctttgg gctcttctcc 360  
 ggggagttcc tccgccggca cgggctgcac ctctgggca cgtcctcgac g 411

<210> 3100  
 <211> 410  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-B12

<400> 3100

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agataaggtc ccgccctttt ccgacattca caggggggac aggaaatcag cgcccatggc 120  
ctcgattccg gcgacgacct tcgcggtcat cttatccgtc ctcttctgtg ccgcggctgg 180  
caccgcggtc gacaacgacc tccccgacta cgtcatccag ggccgcgtct attgcgacac 240  
ctgccgcgcc gggttcgtga ccaatgtcac cgagtacatc gggggcgcca aggtgaggct 300  
ggagtgcgaag cacttcggca ccggcaagct cgagcgctcc attgacgggg tgaccgacgg 360  
gaacggcacg tacacgatcg agctcaagga cagccacgac gaggacatct 410

<210> 3101

<211> 457

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-C10

<400> 3101

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gttcacctct cttcctctc gtccctgcct gccagggaga ggggaagtca gaggcacgga 120  
gtggcgagca gcagacgccc gtgaaccatt gtagctgtcc ctgtcgctgt cgtcgtaaac 180  
gaaccacac aaggaaagga tggagaagaa gccgaccatc ctcatgaaca ggtacgagct 240  
cgggcgacg ctccggcagg gcaccttcgc caagggtgtac cacggccgga acctcgcgtc 300  
cgggcgagagc gtggccatca aggtcatcga caaggagaag gtgatgcgcg tcggcatgat 360  
cgaccagatc aagcgcgaga tctccgtcat gcgcctcgtc cgccacccca acgtcgtgca 420  
gctgcacgag gtgatggcca gcaagagcag gatatac 457

<210> 3102

<211> 283

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-C12

<400> 3102

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 cgteccccgtc cccgcgcgag cccgcctcct cggccgcoga ggacgccacc gcactgtcga 120  
 gcgcggcgac ccacgcgcgg cgccgcttcg gctcgggcac ccgctcctcc tctcctcct 180  
 cggccccgcc gtcgaacccc gggatcggga gcccgcgctt ctccggagaa gcagaagagc 240  
 tcccgcgcgc cacggggcca ggaggcgctc ggggcagcgc gcg 283

<210> 3103  
 <211> 351  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-D10

<400> 3103

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 gaaggcgaag gctgtgggag gcgcgccgct ggtgcccgct ggctcgttg acatcgcgca 180  
 gctgggcgcc aaggcgacg gcaagtcgga cagcaccocg atgggtgctca aggcgtggaa 240  
 gcacgcgtgc gaggcgacgg ggcagcagaa gatcgtcatc cccaagggca actacctgac 300  
 gggcgcgctg gacctggtgg gccctgcaa gtcctccatc atcatccgcc t 351

<210> 3104  
 <211> 393  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-D11

<400> 3104

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 gtctactgga tgggggtcaag aagtatccgg gcaagtcgct tctgggaacc ctgcttattg 180  
 ctgcgccgat gctagcgcgg ccgtggactg cgcgggtccg agaagtcgag gtcgtcgcga 240  
 catatcccag gaaccttcgg acttggaaac aagctgtcca taatatggaa agcatgattg 300  
 ggacgaaggc cgaatcaatt ctgaagctat gcgcaaggaa gcttcggctc agtagcagaa 360

aaaggaaccg acctaaaaag gaaaaggcta ttt 393

<210> 3105

<211> 282

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-D6

<400> 3105

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tacgcagctg tcgtgtgtcg aattttaaca gcgacggcca tgcattcagac gccaccccca 120

cacatcattt tctttcttcc tttcttttga ttcgacgacg cctgtgagtc atgcatgctc 180

tcgatcgagg caaagctgtt gtatgttggt agcgtgtact gtttttttat tatttataaa 240

gttttgatgg gaaggaaaaa gaagggcggc cgctctagag ga 282

<210> 3106

<211> 363

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-E12

<400> 3106

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ctgatgtgcg agatcgaggg ccaccacctc ggggcggcgg ccatcgtcgg ccacgacggt 180

gccgcctggg cgcagagcac ggcgttcccc gagttcaaga ccgaggaaat ggccaacatc 240

cataaggact tccacgaacc aagggaactc ggcgcgacag gcctgttcct cggacctacc 300

aagtacatgg tcatccaagg cgaacctggt gccgtcatcc gtggcaagaa gggatcagga 360

ggc 363

<210> 3107

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-E9

<400> 3107

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caaagagggga agaacctcct atacagcgac caccatcgat tgctcgctccc agctcatcag 120

cagcgacatt tctgtacctc actcacgcga cagacacgct agtcctggcc cacgtactgt 180

gctcagttcc aatgtcgctc cctcgaggca gaccatcggt atcagtgact cacctctata 240

aagtcactgt catcaccttc atggacacct agatcgacgt caagcccgca tgtctgatcg 300

ttcagggact gtttggtgac atcattccaa atatcgacag aaacttcgga gcactttgca 360

caggggagaa aggaattgcc aagtccggca agcctctgtg gtacaagggg tcgacgttcc 420

acaggattat cccgggggttc 440

<210> 3108

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-F10

<400> 3108

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catggcagcc gtccgggtccg acaggggtcca ccaccaccac cgccgctccg aggcgtcgtg 180

cccggcaacc tccgcgggccg tggcgggcggc gagggccgat gacgccctgc gccagcgccc 240

gcggggggctc gtgcaggtcc gggagcgggga tcagggcccc ctgtcgacgg ggcaccagca 300

cctgcaccac catcaccacc agctgcggcg gtcggcgggcg ttcccacccc gccgcccggg 360

gccgggggcgc cgccctcctc agcgctgcca aagcgacctc aacatcaagg gagcacgctc 420

ct 422

<210> 3109

<211> 443

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-F11

<400> 3109

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 gcgacgacct tcgccgtcat cttatccgtc ctcttctgtg ccgcggctgg caccgcgctc 180  
 gacaacgacc tccccgacta cgatcatccag ggccgcgtct attgcgacac ctgccgcgcc 240  
 ggggttcgtga ccaatgtcac cgagtacatc gcggggcgcca aggtgaggct ggagtgcgaag 300  
 cacttcggca ccggcaagct cgagcgctcc atcgacgggg tgaccgacgg gaacggcacg 360  
 tacacgatcg agctcaagga cagccacgag gaggacatct gcgagggtgt cttggtggag 420  
 agcccgcgca aggactgcga cca 443

<210> 3110  
 <211> 421  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-065-Q1-E1-F12  
 <400> 3110

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 gcgccccggg acagccccaa cacggatggc atccacatgg gcgactcatc cgggatcacg 120  
 atcaccaaca ccgtcattgg cgtcgggtgac gactgcatct ccacggccc cgggacctcc 180  
 aaggtgaaca tcaccggcgt gacctgcggc cctggccacg gcacgacat cggcagccta 240  
 gggcggtaca aggacgagaa ggacgtcacg gacatcaacg tcaaggattg cactcttaag 300  
 aagacgatgt tcggcgtccg catcaaggcg tacgaggacg ccgcctccgt gtcaccgctc 360  
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<210> 3111  
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 <213> Zea mays  
 <223> unsure at all n locations  
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cgatgagcac ctcatgtgcg agatcgaggg ccaccacctg agctctgccg ccatagtcgg 180  
ccacgacggc gccgtttggg cccagagcac cgcattccca cagttcaagc cagaggagat 240  
gaccaacatc attaaggact tcgacgagcc tgggtttctg gccccgatcg gcctcttctt 300  
tggccccacc aagtacatgg tcatccaagg cgagcccgcc gctgtcatcc gcgggaagaa 360  
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cgagcccatg acccctggac agtgcaacat g 451

<210> 3112  
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<212> DNA  
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<223> Clone ID: LIB148-065-Q1-E1-G11  
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caagccggcg cacgtcgccc cggggctcac gctcaccacc gagccccaac caattaataa 180  
tatatatata tagctaggat cgatcgtcag taaaatggca ggctccgccg tcttgaggag 240  
ccccctgtcc gtcctcctct acatcctcgc cgccgtgcc gccaccgcc cggcgacgcc 300  
gaccgacgcc gccatcgacg aggcgtacgc gcatctcgtc aacctcaccg ctaaccagga 360  
gtactggggc gagcgcgcgg aggcggcgca cgcg 394

<210> 3113  
<211> 298  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
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<400> 3113

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gcctggggct gctggcggtc cccttggtgt caacgagcgt catcctcgtc tctaccgcc 180  
tcaacggccg cctgnaggcg gacctcaggg tcataatacc cggcaaaggc aacggacccc 240  
cggacaaggg cgggcgccgc acaaggaaga ccagaaaggt gcccttcccg gccaaactt 298

<210> 3114  
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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-H11

<400> 3114

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gcgcggagtg cgacaagacc gtccacttca tcgacctcct caccggccgac ggcgtcacct 180  
accataagac atgcttcaag tgcagccact gcaaagggat cctctcgatg tgcagctact 240  
cttccatgga cgggtgtgctg tactgcaaga cccacttcga gcagctcttc aaggagaccg 300  
ggagcttctc caagaacttc acgccagggtg gcaagtcttc agacaagggt gaactgacaa 360  
gggccccagc aagctatcat ctgcgttttc tgggtactcag gataagtgtg cagcttgcca 420  
gaaaacagtg taccgcg 437

<210> 3115  
<211> 356  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-065-Q1-E1-H7

<400> 3115

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aactagccct attaataaat ttatgcacga atgcaacatc ggtttcagca tgttcctctt 180  
tacagaatac tactgcttcc gtgtatacag agaaactaca ttccacggag tagtaaataa 240  
acagggatta attagcgccg tgtgcatgca tgcatacngc gttgggctgg ccgacatgat 300  
cataacaatt aattaattaa ttaaggcgaa gacagcaagc gtggaggatc gatgcg 356

<210> 3116  
 <211> 410  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q1-E1-A1  
  
 <400> 3116  
  
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 caagatgagg gagatcatca gcatccacat cggccaggcc gggatccagg tcggcaacgc 180  
 ctgctgggag ctctactgcc tcgagcacgg catcgagcac gatggcacca tgcccagtga 240  
 ttctcgggtt ggcgtcgca atgatgcctt caacacgttc ttcagcgaga ctggttccgg 300  
 caagcatgtg ccaggggcca tcttcgtcga ccttgagccc actgtcatcg acgaggttcg 360  
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<210> 3117  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q1-E1-A5  
  
 <400> 3117  
  
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 agccgtaacc agcgtggga gcgtcggacg atggtagctc tacaacattc atcaccgaca 120  
 gacgggtctat gtggagctgg gtctcacggg caggatttct gtcgtccgc aaactcgtac 180  
 tttcatcata atcacccttg ttgtcgaatc ttcagacatc agttacactg tcactgtcaa 240  
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 tctctacgac ggaccacac tgagctacta gaacattca 339

<210> 3118  
 <211> 417  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q1-E1-A7

<400> 3118

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tccttggcgg ccgagcgggg ctccctctga cgactccgcg ctctctctgg tgcacggccg 120

cttctattgc cgtcgcctgg ggcttctgct gcgttaccat gggccaaaca acgaggaaaa 180

tgccgagaga gagaggtaga gacagtttgg tcgtcgagtc acatggaggg tgccctggtg 240

gccggggaat ccttcacctg cgggggtgcta catcgccggg ctgctgcata gtggtctgcc 300

tctactacca gggctgactc cattgccgga cagccaaaac tctcggtcga gtctctgaag 360

gccgtctgtc cctgttcctt ccgatttcca agcgccgcgg ggctgtgctg ctaccgt 417

<210> 3119

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-B12

<400> 3119

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ggcaggatcc agtgcaaggg caagtgcacc gagcagaagg gcatcacggc gccggccatg 120

aaggtctgcc aggaggagtg cgacaaggcg tacgtggtga aggcggccga ggtcaccaag 180

gcctgcagcg tcacctgcgc caaggagaag aaccgcgcgc tcagcgagaa ctgcaagagg 240

tcctgcaccc ctctctcttc ttgaagcgaa gcccttgaa atgaatgaac catgcatgca 300

tgcatgcatg tatgcatgcc cccgggggtga cgtggcggtc agtcaggcg ctgagcgagt 360

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tata 424

<210> 3120

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-E1

<400> 3120

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gaggtagtgc ccggggtggc gtgcctggcc tttaggaagc tgccgcgggg agggcccggg 180  
atcttgggca acgtgctcat gcaggagtac atctgggaga tcgaccacgg aaaggggaag 240  
atgaggttca ggaaggacaa gtgcaacacc catcatctcc acaacagcaa aggcggagag 300  
gtctataata ataataatgg caattcctcc tctactgtcg tgcacgcgt caattaattc 360  
gttctctcct ctctacctct acaaaattaa aggaccagac catgcatgca c 411

<210> 3121  
<211> 357  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-066-Q1-E1-E5  
<400> 3121

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ttctccctcc tccacctttc tccttttctt gccacggcaa aacaccttcg ccggcgagag 120  
catggcgatg gcgtagcgtg tcctggaggt caccctggtg tcggcaaatg acctcaagaa 180  
agtgtcgctc ttctcccgga ctgcacata cgcctgggtc tccatctccg gattcgacct 240  
ccgcacccct tcccacagca cccaagcaga ccacagcaac ggctgcaacc cctgctggaa 300  
cgccgtggta cacttcccca tcccggctgc cgctgacacg cgcggcctcg cactcca 357

<210> 3122  
<211> 319  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
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gcatccaaga acttctaagt agccactttc cctcctcttc ttcacctcgc atatgcccac 180  
aagcaaccat gcaaataata acatgcatca tgcacgata ttcattcttt cgctcatgca 240

ctccaatatg gtgccggagt taaaaaaatg taaatcaatg tgcaaactca aatgacatct 300  
taaccagttg tgatcanaa 319

<210> 3123  
<211> 303  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-G8

<400> 3123

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gagcagtatt ccgatgatga aatctggcag gcattgggcc gctgtcagtt gaaagaagcc 180  
gtagcttcaa aacccgaaaa gcttgatgct tcagtcgtcg acaatggtga aaactggagt 240  
gttggacaac gtcaactgct atgcctgggg cggtgatgc taaagcaca caaaatactg 300  
ttc 303

<210> 3124  
<211> 286  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-H11

<400> 3124

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agccagagaa actaataaaa ctctgccgc cgccatccga gcgaacaagc caaccgacct 120  
cgtccccaag gcaatccgcc gccgacgtac caccaccacc gcaggagcga gatggagatg 180  
aagaggatcc tcttcgccgt cctcgtcgtc atcgccgcct cggccaccgc agtgctggcc 240  
tccaccgagg ccgccgccgc gggcgcccca actgcctcgc agtcgt 286

<210> 3125  
<211> 284  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-H2

<400> 3125

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tcggggtccg atcgagaaca gggaagcaag aggctgctag agatcgagct catcaaccaa 120

tcaagtcgta cgtcgtcagc atcacgcgac cggatggcgc gcgccgcgtc cagctatgta 180

tccaagaggg ggctctccgc aaccattaag gtggccgagg aatcccttaa caaaggggag 240

gacaaggcgg ttaaactggg aactgtggcc aaggacatcg ccag 284

<210> 3126

<211> 356

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-H6

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cctggtgctg tacggcagga tccagtgcaa gggcaagtgc accgagcaga agggcatcac 120

ggcgccggcc atgaaggtct gccaggagga gtgcgacaag gcgtacgtgg tgaaggcggc 180

cgaggtcacc aaggcctgca gcgtcacctg cgccaaggag aagaacccgc gcctcagcga 240

gaactgcaag aggtcctgca cccctcctcc ttcttgaagc gaagcccctt gaaatgaatg 300

aaccatgcat gcatgcatgc atgtatgcat gcgccggggg gacgtggcgt tcagct 356

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-H8

<400> 3127

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atggcaatgg gaatcctact ggtatcagtt acaacaagag tgctcctgaa catccaaagc 120

tggatgcctc acacatcggg aacgcagcac cgtcaagct ccagtttggg ccttttggga 180

tcaatggctg gatgaatgac acggatggta ccagccatac tggg 224

<210> 3128

<211> 366  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-A10

<400> 3128

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cctaccgcga cgcaagaggc agcgatccgt atgtcgtcct acggcttggc aagaagaaac 180  
tgaagacaag cgtgaagaag agatccgtga accccatatg gcaagaggag ctaactctga 240  
ccgtcacaga tcccagccaa ccactgaagc tggaggtggt cgacaaggac accttcagca 300  
gagacgaccc catgggagac gcggaggtgg acgtggcgcc actgatggag gcggtgagca 360  
tgaacc 366

<210> 3129  
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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-A4

<400> 3129

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tcgtgtggac cgtgtgctcc agcggtttga ccctgccaaa ttcaatttca caaaagttgg 180  
ccaggaagag gttctcttcc aatttgagaa tagtgggtgt gatgacagct atttcctgaa 240  
caacgctcca atcattgctg ttgatcgggc tccaaatgtt attgctatca atgtaagccc 300  
aattgaatat ggacatgtgc ttctcattcc tcgtgttctg gaccgcctgc ctcagaggat 360  
tgattcagag agcttcttgc ttgcactgca aatggcagcc gagggaggta gcccatat 418

<210> 3130  
<211> 446  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-A5



<400> 3130

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ttcctcctag tgcccagctt tattgcagat ccagccctct gatcctcgtc ttctttcacc 240

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gccacatggg gaccccgccc accgac 446

<210> 3131

<211> 456

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-A7

<400> 3131

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gccctggtgg ccggggaatc cttcacctgc ggggtgctac atcgccgggc tgctgcatcg 300

tggtctgcct ctactaccag ggctgactcc attgccggac agccaaaact ctcggtcgag 360

tctctgaagg ccgtctgtcc ctgttccttc cgattccaag gcgccgccgg gctgtgctgc 420

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-A8

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 cagggacgac ccgatggggg acgcggagat cgacgtggcg ccgctgggtg aggcggcgaa 420  
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<210> 3133  
 <211> 381  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-A9

<400> 3133

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 ccctgggtgtg gagcaagaac cagtgccagc attcttaciaa ttgcaagatc ctcccgaata 180  
 gcttgggtgct ggattttgtg acgaacgtcc agatccgagg catcacgtg ctcaacagca 240  
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 aggccccgg cgacagcccc aacacggagc gcatccacat cggcgactcc agcaacgtga 360  
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<210> 3134  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B10

<400> 3134

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ggatgtggcc ttgctcccaa tctctgcatg ggaagtcacg ccggaggagt gtgatggtgt 180  
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aagaaagaga ttacctaaca tttggatctc actgccacat ctggtgtcac atccatattg 300  
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<210> 3135  
<211> 249  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B11

<400> 3135

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agggcatagt atcgcacaca ctgtgagcag acttgctgac agaactgtaa cattcggttc 180  
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<210> 3136  
<211> 76  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B2

<400> 3136

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cggccgctct agagga 76

<210> 3137  
<211> 453  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B4

<400> 3137

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 gcgtgcggca acgtcccat cttcaaggac ggcaagggt gtggctcatg ctacgaggtg 360  
 agatgcaagg aaaaacctga gtgctcgggc aatccagtca cgggtgttcat cacagacatg 420  
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<210> 3138  
 <211> 372  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-066-Q2-E1-B5  
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<210> 3139  
 <211> 387  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-066-Q2-E1-C12  
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ggcaccgccg tcgacaacga cctccccgac tacgtcatcc agggccgcgt ctattgcgac 240  
acctgccgcy cccgggttcgt gaccaatgtc accgagtaca tcgcggggcgc caaggtgagg 300  
ctggagtgcg agcacttcgg caccggcaag ctcgagcgct ccacgcgacg ggtgaccgac 360  
gggaacggca cgtacacgat cgagctc 387

<210> 3140  
<211> 423  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C3

<400> 3140

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attgggaggg agagcctcaa ggccgggggat catatctact cctggagggc ggcgtgggtc 180  
tacgcgcac acggaatata tgtgggcgat gataaggatg tccatttcac aagaggaaga 240  
ggacaggagg tcggaacagg aactgtcgtc gatattattc ttgtgagttc cccccaaaa 300  
cgaagcaaca cgccttgccc ggtgtgcacc gacgaaacca ggcacagcag cacagagacg 360  
aacggcgtag tatctcctg cctcagctgc ttcctagctg ggggtgctct ctaccgtttc 420  
gag 423

<210> 3141  
<211> 399  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A9

<400> 3141

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catccgctgc ccaagtttgg ggagtgggac gtgaagaatc cggccacgtc cgagggttc 180  
accgtcatat tccagaaggc ccgcgacgac aagaagacca ccaccggccc tggggctggg 240

aacgcgcgcg caggcattcc gccggccttc aggaacggcg gcggcgacgg cgggtacagg 300  
 cccgacttcg ggcacggcaa ccagtacacg ccgccccaaac ggaagaagtg ggccttctgt 360  
 ggctgctgaa tcgaagctcg ctgtgctgct gtgctgact 399

<210> 3142  
 <211> 393  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-051-Q1-E1-B1

<400> 3142

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 cgcctcggcg cggcgccgt gttggcgctc ctagtggcgg tcgcggcggt ggccgcgttc 180  
 ctgcgggtgc cggcctcggc gaagtccggg gagctgagcg cgatgggggt gctggcggcg 240  
 aaaggcgcca ggcggcggc cccgcagagt tgctcggcg cggtgggcca gtgcgacgtg 300  
 gacgaggcgg aggaactcgg gctgagcggc ggcggcctcg gctccgacga cgcggtgcgg 360  
 cggacgctgg cgcagcgga accgaccaac cgg 393

<210> 3143  
 <211> 398  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-B10

<400> 3143

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 cgacaagccc acgtactcca cgttcttgaa gctcctgcag gacaccaagg tcgcgggcca 180  
 ggccaatcag ctccaggtcg cgacgtact ggtcgtcccc gacaaacttg ccaagcctct 240  
 ggcgtctctg cccgccgatt atgtgcggtc ggcagtggag aaccacgtcc ttctcagtta 300  
 cttcgacccc atcaagctgg acgagatgaa catacgcacc gtcacctccc ccacgtgct 360  
 ctccgtcacc gacaagaaac tcggcgctct caactaca 398

<210> 3144  
 <211> 441  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-B11

<400> 3144

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 agaaggaaga gtcaaagggc atcgatgcga aagcgccgg gcctgggtggg tccttcgaca 180  
 tcaccaagtt gggcgccctcc ggcaatggca agacagacag cacgaaggct gtgcaggagg 240  
 catgggcacg ggcgtgcggc ggcactggga agcagacaat cctcatatcc aagggcgact 300  
 tccttgctgg acaactcaac ttcacaggcc cttgcaagg cgacgtgacc atccagggtg 360  
 atggcaatct gctggcgacc acggaccta gccagtacaa ggaacatggt aattggatcg 420  
 agattctacg cgtggataac c 441

<210> 3145  
 <211> 411  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-B12

<400> 3145

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 aggtagagaa tcggtttttc ttgtctcagc ccgggggtctg ctgcgtcttg tgggtggtgaa 180  
 ggggagaaat tcgtgagatc tgttcggat caggcgtgcg agctcgggaa tcaggggttt 240  
 cacacatagc ttcgtcgatt tgaatttgat gtactaatgg agtctaaggg tggcaaaaag 300  
 tctagcagta gtcgttctat gatgtatgaa gctccccttg gctacagcat tgaggacgtt 360  
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<210> 3146  
 <211> 464

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-051-Q1-E1-B2  
  
 <400> 3146  
  
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 ctctccccgc aggcgctggg taagggtagg ggaggcaggg gacacgggtg cgccgtcaac 180  
 ccgcaggctc cgggcattct ctctcgcacc ccgttcccgg aggtgtgcac gtccaccgcc 240  
 gggcggcacg cgtccaagta cccggtcatc gacaacctgg ccgtgctgaa catgcaggtg 300  
 gacgcgttcg ccaagcgcac cgcgaggcg cgcaagcacg tcgcgaggtc ggcccgcacc 360  
 atcccgcgcg agcagacgca ggcgctcacg ttctgcgaca ccatgtacat gaacacgcaa 420  
 gacaccatcg gggccgcgca gccgggcac acgttcaagg acac 464

<210> 3147  
 <211> 348  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-051-Q1-E1-B4  
  
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 cacctacggc gaggtcctcg agtccaagat catcctcgat cgggagacgc agagggtccc 240  
 cggcttcggc ttcgtcacct tctccacgga ggaggcgatg cggaacgcca tcgagggcat 300  
 gaacggcaag gagctggacg gccgcaacat caccgtcaac gaggccca 348

<210> 3148  
 <211> 421  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-051-Q1-E1-B5  
  
 <400> 3148



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cctctccaag cgtcaaggcg gtcctccggc tcgccgcggg ctccgaggag gaggaggacg 120  
gcgggcgcaa aaagaagccc cacgtcaacc acggcaagtt taaggcggag ccgtggacgg 180  
acgggcacgc gacgtactac ggcgggcgcg acgggttaac tgacaccacg gacagcggcg 240  
cgtgcggcta caagggcgag ctggggaaag actacggcac cctgacggcg gccgtgggcc 300  
cgtcgtgta caccaacggc accgggtgcg gcgcgtgcta cgagctcaag ggccccaagg 360  
gcaccgtggt ggtgacggcc accaacgagg ccccgccggc cggttaaccg gcagaaaggg 420  
c 421

<210> 3149  
<211> 401  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-B6

<400> 3149

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gtgacgacaa ccagcctgct ggcgctggcg ctggcagcgc tggctttcgt ctccagggcc 180  
gcggcgcagg gcaacggctg ttccagcgtg atgatgaccc tggccccgtg catggacttc 240  
atctccagca aggcgtcgga gccggggatc tcttgcgtgct cgggtgctggc cggagtcgtg 300  
cagaccgacc cccgctgcct ctgcatggta ctggacggca ctgccacgtc cttcggcatc 360  
gccatcaacc agaccagggc gctggagctc ccggcgtctg c 401

<210> 3150  
<211> 413  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-B7

<400> 3150

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gacagcgacc aggaagaggg tgctgagggg ggcgatgacg gtgacagcag ttgcccacac 180  
gccatcgaca tgcaggcgga ggagttcatc accaagttct atgagcagtt caagtcagaa 240  
tcgttcaacg gccgtgcctc cgagtgatcc attgatccat ccgcttgccg catgtatgta 300  
atcgttctga tcttaaccga aattgcattc gtgtcagaga cgactctacc caatatggat 360  
caggaagaaa tgtatcagtg atcgcatcga taaacacagt ttgtctgaac tct 413

<210> 3151  
<211> 423  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-051-Q1-E1-B8

<400> 3151

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tcagcgtctg cagagaaaca gcctccgaac cgtgagaggc cgaaaggaat gagggtcagc 180  
agcaattttg cagacgggaa ggctcaacc tcaacaaccg gagatcatga aggcgcgtcg 240  
acccggcagc ctctggcgg cgacagcagc attttgctgg gctagcgtgc atatgaatct 300  
tgccctatgc cgcgcgcga cgggtggttg gtccgtcagt ctgtggtctt gttttcgtgg 360  
tcaggccatg tgtcncatct ccggtccttc agatgatctg gttcgcattc gtcttctgta 420  
tgg 423

<210> 3152  
<211> 299  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-B9

<400> 3152

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atgtcacagg aaggacagct ggcttcgaa ctcaatacac acagggtgtc tatgatccca 120  
ggctccggac gtgcatatg cacaacgaga aggacaagag ccaacaagga ccatactcat 180

gtagctaccc tgtggcgctg ctggaagcag cggccgcacg ttcgagatca cgaatctctg 240  
cgcgaccatc caacgtaata ccgcctccac aaaggcactc caatacactt caacgtcag 299

<210> 3153  
<211> 424  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-C1

<400> 3153

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ccgagaagag catagactcc ctccacgtcg atggctacgc cttcttcggc gtcgggatgg 120  
gccccgggaa gtggtcgccg gaggtgagga agacgtacaa cctgctggac acggtgagcc 180  
ggcacacgat ccaggtgtac ccgcggtcat ggacggcaat catgctgacg ttcgacaacg 240  
cgggcatgtg gagcgtgcat tccaacatct gggagcggta ctacctcggg gagcagttct 300  
acatcagcgt cgtctcgccg gcgcgatcac tgccgcgacga gtacaacatg cccgacaacg 360  
ccctccgctg cggcaatgtc gtggggctgc cgtgcccgc gtcctacgcc ccgcgcgcta 420  
agac 424

<210> 3154  
<211> 411  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-C10

<400> 3154

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cgacccggcc atcccgacg ccatgagcgg cgtgcacgcg ttccgcacga tgccggccgt 180  
cgggcccggg agctaccggg ggcggatcgc cgtggtcggg gacctcgggc tcacctacaa 240  
caccacctcg acggtggacc acttggtgcg caaccgcccc gacctggtgc tctctctcgg 300  
cgacgtctgc tacgccaacc tgtacctgac caacggcacc ggggaggact gctactctg 360  
cgcttcgcc aagtccacgc ccatccacga gacgtaccag ccgcgctggg a 411

<210> 3155  
 <211> 466  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-051-Q1-E1-C12  
  
 <400> 3155

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 agaaagtgca agaagttcct ccgcagcgcg ggcgcgtgct gctgctcgcc gtcggcctcc 180  
 tccgcccctg ctggtggtgt gcgcggcaac gaagaggcgt cgacgtcggc gctggcttcc 240  
 gcgccagatg gcaagaaaaa gaagaggtgg aggaagagaa agttctggag aaagaagaag 300  
 aaggccaaga aggagagcga cgatggcagc ggcgagctcg tggatctcgt caacagcttc 360  
 tcggccaagt ccgacgtgtg caagaacgtg aatgcggccg aggagatcct acggggctgc 420  
 aaccagaaca tggccagcag ggcgctgacg ttcagcnagc tgggcg 466

<210> 3156  
 <211> 391  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-051-Q1-E1-C2  
  
 <400> 3156

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 cctgcgcggc cctgtgaccg tgaggcgaca cgacgccgag agatcacccg cccccgcgat 180  
 cgtgtccgcc ccgcttgga ttgtgaggta aagcgtgatg gcagcgcgc cggcgagggc 240  
 tcgagccgac tacgactacc taatcaaact gtcctcatc ggagacagcg gcgttgga 300  
 aagttgcctc ctgttacggt tttcagatgg atcattcacc actagcttca ttaccactat 360  
 tggcattgac ttcaagataa gaactgttga g 391

<210> 3157  
 <211> 406

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-051-Q1-E1-C3  
  
 <400> 3157  
  
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 agcctaagac gcttgagggg aaagccccag ctgaggccac catctccaca cccaaggttg 180  
 cacctgagac cactaccatc cacattgagg ttgcggcaaa acatgcagta gttgagaagg 240  
 tggaggagga caaggaggag gcactaacag tggcggcgaa acaagagcca gcagccacca 300  
 ttgagcctca gcagattgct agtgagggtga ccacttcgga agtggcggtc gtcggtgtcg 360  
 agcctgagaa caaagaggag gaggaagttg tggagaagaa cgtcac 406

<210> 3158  
 <211> 388  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-051-Q1-E1-C5  
  
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 ccctcagcgc ggccgaggca ccggcagagt caccgaaggc aggcagtcct gccaaaggcac 180  
 cggccgagtc accgaaggca ggcagtcctg cagctcctgc caaggcacc gagtctgctg 240  
 ccacgagaac tgcccccgct aaggcacctc aagccgcctc ccccccgcc gttgccgctg 300  
 ccccatcgtc gtcgtcgtct aggaagtctg gtccagctgc cgcgccgacc accgccgcct 360  
 ctacaccgtc ttcttcacg gacgaaga 388

<210> 3159  
 <211> 396  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-051-Q1-E1-C7  
  
 <400> 3159

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 acaagggggg aggggaaaac acgtacattc acccggcggc aataatggcc tcggttcggg 180  
 ctccggcgac gacgaccgcc gccgtcatcc tatgcctatg cgtcgtcctc tctgtgccc 240  
 cggctgacga cccgaacctc cccgactacg tcatccaggg ccgctgttac tgcgacacct 300  
 gccgcgccgg gtctgtgacc aacgtcaccg agtacatcgc gggcgccaag gtgaggctgg 360  
 agtgcaagca cttcggcacc ggcaagctcg agcgcg 396

<210> 3160  
 <211> 331  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-C8

<400> 3160

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 gtgcgcaaga accggtcggc gctgtggatc cggcacagcg acgccgtgtc gtgcctgagc 180  
 ccgacggacc cggcgcaggg gctgtcttac tccgggtcgt gggaccgcac cttcaagggtg 240  
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 tccgtcgtgg cggcgttcga cgggctgggtg t 331

<210> 3161  
 <211> 330  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-C9

<400> 3161

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 agggctccgtg tacgtaggcc gaatccggac ccaaccaaac agtactagac tggataaac 180  
 tgcacctaac ttaaattgggt ctttcttctc aaacgccaaa ttaaattggc caaaaaaact 240

gaaaaaaggc cggacgctct agatgattca agcttacata cacatacaag ctacgtcata 300  
cctcatcaaa tgtatcacct aaattcaatt 330

<210> 3162  
<211> 318  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D1

<400> 3162

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gcttccagat gcagaaagac attgaacctg acaatattca aatgcccatg catcagacgg 180  
acatgtacat ccataatagg attttgacag aaattgcggc ggggtgcgcct gttgtaagct 240  
tttgttccgg acattccggg attaaaagca aaggtaacct gtttccggaa aagcgaacaa 300  
aaataaagga tccagaca 318

<210> 3163  
<211> 437  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D11

<400> 3163

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gcgcgtcctt ggcttccctc acctccatca tctacggcta caaccgcggg gtgatgagcg 180  
gggcgcagaa gttcgtgcag gccgacctcg gcgtcacgga cgcgcagctg gaggtgctca 240  
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gcgcgggccc gcgccgcacc atcgcgctgt cggcggcctt gttcctcgcc ggctcagccg 360  
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cctgcggatt cggcctc 437

<210> 3164  
<211> 435  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D12

<400> 3164

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attgagaagc agggagaaaa aatggcactg gccattgag gaagcttgag aaccagttaa 180  
caagaattgc caacatattc ttggacaatc ttgttaacag agttttaagg tttcccagca 240  
gagaagagcg cgtgcaacca ccacattcat ataattaata agcaagggtt agagaagagg 300  
caacatgggc acaaagatga agaaggggat cctgaagccg ttccgctata tctcaaccat 360  
catggatggg aaggaggctg aaatgcaa at tgggttcccg acggatgtaa aacacgtggc 420  
acacatcggg tggga 435

<210> 3165  
<211> 439  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D2

<400> 3165

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gagcgtcccc tctcctccg gattcaggag gaggggtccc cccgccgaga acgggcacgg 180  
ccatgacgcc ccgccgccct ccaggcggtc ctccgctcc ctctcccgcg gccactccac 240  
gccgctgact ggcgagagga ccgtgaaaag gctgaggttg tccaaggcac tgacgatacc 300  
ggatcacacg accgtgcacg aggttgctcg gaggatggca tcacgcaggg tagatgccgt 360  
gttactgacc gactccaatg ctttgctctg tgggatcctt accgacaagg acataacca 420  
caagagtgat tgctcgtga 439

<210> 3166  
<211> 122



<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-051-Q1-E1-D3  
  
 <400> 3166  
  
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 ccgaactaag cacaagaat tgactgaaag aaagggctga cgtccctaga ggatttaact 120  
 ta 122

<210> 3167  
 <211> 400  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-051-Q1-E1-D5  
  
 <400> 3167  
  
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 gtgctggagg agctcatgtg gaccatgttc tgcaacggca agagggtggg ctacgcggtg 120  
 cggcgggacc ccaccgagga ggacatcgcc gtgctggaga cgctgtgggc cgtctccatg 180  
 ggcgggcggtg tgctccccgg caggtcggac atggacggcc ccgacggcga gatggcgtag 240  
 atgcgcggga gcttcgagca caccgtcggg tcccgggact cggagtcgct ctacatggtc 300  
 ggaccgcccc gcggcgactg cccggagctc gccatcttct tcgttaggct atgaattgaa 360  
 ccgagcgaac catacgaatc gaacaatata gtgtacacgt 400

<210> 3168  
 <211> 309  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-051-Q1-E1-D6  
  
 <400> 3168  
  
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 cttcaattgt cagaaaaggg gttataaaga acatgaggcg caacattgca gatggaaata 120  
 gttttgcatt tctttgtggc aacatagatg agcttgagca ctctgttcac gagaatttac 180  
 ctagagtctc tgtagtcatg cctttgaacg gctttggcga acataagttg caaaattgga 240

gaagtcagat tacatcactt tatggtgggc cactggaatt catgtttatc gtcaaaagca 300  
gagatgatc 309

<210> 3169  
<211> 353  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D7

<400> 3169

ctcgcggggtc gaccacgcg tccacggaaa ctctgaaac gagaccggcg gtcgacgagc 60  
acaaggcgaa ggaggcgacg accgtcgtcc cagcaccgtc ggcgaggag gagaagacca 120  
ccaccgacga acaggccgct gccaaactaac tgattacaag gaggccaaga cctagacgac 180  
ttgcatccac cacaatccat tttgtccaac tgaattcggc cgccggccgg gcggtccctt 240  
ttggtgtacc ccacaccatg gttcctttcc ctgatattgg cccggtctgg actcactcaa 300  
taaaatgtgt tctatctata gaccctttcg aaaaaaaaaa aaaaaaaggg ggg 353

<210> 3170  
<211> 415  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D8

<400> 3170

ccacgcgtcc gccacgcgt ccgctgagcc gttgatgaga gcagcagtac cgttggtcgc 60  
agcggcgacg gcgggcggcc ggcgacgcg atgtccgttg tggcgccgt ggggcccgcg 120  
gcggcgccgt cttacgggca gccgctgtgc ggcgccgggg cgaggaagag gaaggacgcg 180  
ggcgtggtcc aggaccagga ccaggaccag gatgcagggt cgtcgttgcg ggggtggttaag 240  
aacgccgcgc tggtcgtgct ggaaacggtg gaggaagagg cggacgcgga cactgagagg 300  
tcgtccatcg gcgcggcgtc cgaggacggc gacgacgagg acgaggagga ggtggctagc 360  
cgcgggacga atggcgccgg ggccccgctc gcctgcatgg acatggggcc cctcc 415

<210> 3171  
<211> 445

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-051-Q1-E1-D9  
  
 <400> 3171  
  
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 tgcctggtgt ggtcctccca aggttcccc gggtaagaac atcacagcca aatatggtag 180  
 tgattggcta gatgccaaagg cgacatggta tggcaagccg acagggtgctg gccccgacga 240  
 caatggtggc ggctgccccg acaaggacgt gaataaggcc cctttcaata gcatgggcgc 300  
 gtgtggcaac gtccccatct tcaaggacgg tctaggttgt ggatcctgct tcgagatcaa 360  
 gtgtgacaag ccagcggagt gctctggcaa gcccggtgtg gtgtacatta cggacatgaa 420  
 ctacgagccc atttgcgga tacac 445

<210> 3172  
 <211> 415  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-051-Q1-E1-E1  
  
 <400> 3172  
  
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 cccacgcgtc cccccacgcg tccggtacc ctgctgctg tctcactcac cccgccttca 120  
 cgctccctc accaaataag gtcccgccct tttccgacat tcacaggggg gacaggaaat 180  
 cagcggccat ggctcgatt ccggcgacga ccttcgccgt catcttatcc gtctctttct 240  
 gtgccgcggc tggcaccgcc gtcgacaacg acctccccga ctacgtcatc cagggccgcg 300  
 tctattgcga cacctgccgc gccgggttcg tgaccaatgt caccgagtac atcgcgggcg 360  
 ccaaggtgag gctggagtgc aagcactttc gcaacggcaa gctcgagcgc tccat 415

<210> 3173  
 <211> 440  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations

<223> Clone ID: LIB148-051-Q1-E1-E10

<400> 3173

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tcgtggggcgc gcagatcacg ctgcagaacg tgcgcaacgt gatcctccac aacctgcacg 120  
tccacgacgc cgcggcgcac ggcgggcgcg cgatccggga ctgcgagcac cactggggcg 180  
tgcgcgggga gagcgacggc gacggcgtct ccgtgatggg gtccagcgat atctggatcg 240  
accacctgtc catgagcagc tgcgcgagc ggctggtgga cgcggtggac ggctccaccg 300  
ccatcacctg ctccaacggc cacttcacga ggcacgacca cgttatgctg ttcggggcca 360  
gcgacgccgc gtccaaggac agggagatgc anggtcacgt cgccttcaan cacttcggca 420  
aagggtggt gcagcggatg 440

<210> 3174

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E11

<400> 3174

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gtaccggcg cggcgctcgg cgtacgtggc ggcgatgtcg gcggtgtcgt tcgtgtccat 120  
ggcgaacgcg ggcctcgccg agtccgcgg cgaccacatg ccctactcca agttctggca 180  
cgccgtggcg ggtgccgcgc gcggggacac caggcagcgg gcggggatgc cgctcctgcg 240  
aagccgggac ggcattgtgc tggcctacgc cccggcgctg ctgcgcgccg ccgcgtcctt 300  
cgcggtgccg ggcgccgtcg agggcgcgcg cgcgagctg ctgagcgccg cgctcgccgc 360  
gcatttctc aagcgggtcc tcgaggtgct gtgcgtgcac cggtagacgc ggagcatgcc 420  
gctgggc 427

<210> 3175

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E12

<400> 3175

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gtgatcgtgg ggatcagtc tctctgtgg gcttctgctc tcatcttctt cttcctcaac 120

gtcaatggat ggcacaccat gctctggatc tccatcatgc cggtggtgat catcctgtcg 180

gtggggacga agctgcaggg catcatctgc cgcattggga tcgacatcac ggagcgccac 240

gccgtcatcc agggcatccc gatggtgcaa gtcagcgact cctacttctg gttcgcacgc 300

cccaccttcg tgccttctct catccacttc accctcttcc agaattggctt ccagatcatc 360

tacttctctt ggattctgta tgagtacggc atggactcgt gcttcaacga ctcggaagag 420

ttcgtccttg cagactctg 440

<210> 3176

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E2

<400> 3176

gtaccgggtcc agaattcccg ggacgacca cgggtccaca cacacacaac cagatctccc 60

ccaaatccac ccgtcggcac ctccgcttca agatgcagat ctttgtgaaa accctgactg 120

gcaagactat caccctcgag gtggagtcgt ctgacacat tgacaacgtt aaggccaaga 180

tccaggacaa ggagggcatc ccccagacc agcagcggct catctttgct ggcaaacagc 240

ttgaggacgg ggcacgctt gctgactaca acatccagaa ggagagcacc ctccaccttg 300

tgctccgtct caggggaggc atgcagatct ttgtgaaaac cctgaccggc aagactatca 360

ccctcgaggt ggagtcctct gacaccattg acaacg 396

<210> 3177

<211> 416

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-051-Q1-E1-E3

<400> 3177

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tcgctgctgg tcgccgtgct agcgggtggcc gccgatgtcg ccaacgccgg ccacgccaag 120  
 cccctaacgc ctggcgggcg cgtggtacac gacaaccacg gcaagttcac ggccggggccg 180  
 tggaaccccg cccacgcaac cttctacggc gggcgtgacg ggtccggcac cacggcgggc 240  
 gcgtgcgggt acaaggacac gcgcacgcag ggttacggcg tgcagacggt ggccgtgagc 300  
 actgtgctgt tcggtgacgg cgcggcctgc ggagggtgct acgaggtgcg gtgcgtggac 360  
 agccctagcg ggtgcaagcc cgacgcggca gcgctggtgg tgacggtgaa cgacct 416

<210> 3178

<211> 420

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-051-Q1-E1-E4

<400> 3178

cgctgcatt caccggtgcg agaattcncg gatcgaccca cgcgtccggg tttgtgcaac 60  
 acccgctcac cttccaggtc ggtaagggat ccaagcctgg ccacctgatc ctcaccccca 120  
 acgttgccac catatccgac gtggagatca aagagcatgg tggcgatgac ttctccttta 180  
 cgctgaagga gggcccgacc ggcacctgga cactcgacac caaggccccg ctcaagtacc 240  
 ccctttgcat ccgctttgct gtcaagtctg gtggctaccg catcgccgac gacgtcatcc 300  
 ccgccgattt caaggctggc accacttata agacgacact cagcatctaa tcagcatctg 360  
 aagatgaact atatttcaaa agagctcatc tggcgcacgt gttagcaaga caattttttt 420

<210> 3179

<211> 355

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E5

<400> 3179

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 cgcagcgagc ggtggccacg atgacgacta agaagtcct cctcgtcate acgctggcgt 120  
 ccgcactcca tggcacagcg ccagacgccg cgaatgctcc cggcgggggcg ttcagcaact 180

gggtggcgat gaaccagcag acctacgcgc tgtaacgcga taagtccgtc agggacggtc 240  
gcaaagagcc cctggacaag aagctgtctg atgcggaaca taagaacgtc acgtacgtgg 300  
tggaccccag ctgtaatggc gattacacca atatcaccgt ggcgctagat gatat 355

<210> 3180  
<211> 184  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E6

<400> 3180

aacacgcgtc cacgcgctcg ccgtccttcg gtaggtggat tgcttcgggtg gtccaccatg 60  
gctcagcgag cgggtggccac gatgacgatt gtgaagccca tcctcgtcct cacggtggcg 120  
tctgcgtcc atggcacggc gccggccgcg gcgaatgcgc ccggcggggc gttcagcaac 180  
tggg 184

<210> 3181  
<211> 393  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E7

<400> 3181

ccacgcgtcc gagcgatata tggatcgacc acctgtccat gagcagctgc gcggacgggc 60  
tggtggacgc ggtggacggc tccaccgcca tcaccgtctc caacggccac ttcacgaggc 120  
acgaccacgt tatgctgttc ggggccagcg acgccgcgtc caaggacagg gagatgcagg 180  
tcaccgtcgc cttcaaccac ttcggcaagg ggctgggtgca gcggatgccg cgctgccgtc 240  
acggcttctt ccacgtggtg aacaacgact acacgcactg gctcatgtac gccatcggcg 300  
gcagccggaa cccaccatc atcagccagg gcaaccgctt ccgcgcgcgtc gacgacagca 360  
ggttcaagga ggtgaccaag cgggagtaca cgc 393

<210> 3182  
<211> 388  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E8

<400> 3182

ccacgcgtcc acccacgcgt ccgcggacat cgacgaaagc tagccagcta gtaacaagaa 60  
caaaaaacac catcatctca tccgcccgtc tcaacgccac cctagccctg tgatatacaa 120  
tggcggccca gagcacgagg atgggtggcg tggccctggt ggtcctcctg gtgggtggcga 180  
cggcgttggg gcccacggcc accgcgtacg gctgctacga cgactgctac gagcgggtgcg 240  
ccaacggcaa gaaggacgac cccgcctgca ccaagatgtg caaccaggcg tgcggcagca 300  
ccgacaaggg cgccgccgcc ggcgcgccgg cttgatcgac ccgggcttta tcggcgcgcg 360  
ggctcagctc gatatcatca tatacaat 388

<210> 3183

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E9

<400> 3183

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tattcccgtc aactgtacaa aactttgtat ttgcacacag aatgtacacg gaggtaaata 120  
ttccccatac ataccctgga acaaattgta ctaattgtca cagattgact gcactcacia 180  
ttacacagca ttcttttggg catttggtgg gtaaatatga aatctctttg ggaatatacc 240  
tgtatatgca gtggtagaga atatcgctgt tccttttatg gtggatgcac tggaaaggga 300  
agaattgtac tctgaccagc cacagcatct cttttgatca tgtccatatt ctgctgtcag 360  
tgaaaaaaga gatttcatta tgtcatttaa cacggatcac caattatgtg agcaggggtg 420  
tctgacattt 430

<210> 3184

<211> 435

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-051-Q1-E1-F1

<400> 3184



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 ggcgtggaag aacgcgtgcg aggcgacggg ggtacagaag atcgatcatcc cgccgggcaa 120  
 ctacctgacg ggcgggctgg agctgaaggg cccctgcaag tcctccatca tcatccgtct 180  
 cgacggcaac ctgctcggca ccggcgacct cagcgcgtac caaaggaact ggatcgagat 240  
 cgagaacgtc gagaacctgt ccatcaacgg ccacggcacc atcgacgggc aaggagccct 300  
 ggtgtggagc aagaaccagt gccagcattc ttacaattgc aagatcctcc cgaatagctt 360  
 ggtgctggat tttgtgacga acgtccagat tcgcggcatc acgctgctca acagcaagtt 420  
 cttccanctc aacat 435

<210> 3185  
 <211> 331  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-051-Q1-E1-F10  
 <400> 3185

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 tgccctccagc aagatgatcc gatcgtggtc gtgctagtgt tcttgatgga cggcactgtc 120  
 tcacggacgc cgtaatatcc ttgtatctcc tcatatcacc accagttata acaatgactg 180  
 cctggatgct aataccaaat cgcatgcaaa cttactgat gccgatcgcg acgaaacagg 240  
 tgacggctac gaatgcagag acgtgcacag acaccgcttc aattccatgc gtacatccga 300  
 ctctatagtt atctggattg agcgtcagca t 331

<210> 3186  
 <211> 433  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-051-Q1-E1-F11  
 <400> 3186

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 ctacgcgtgg tcgccgatgt cgccaacgcc ggccacgcca agcccctgac gcctggcggg 120

cgcggtgttac acgacaacca cggcaagttc acggccgggc cgtggaaacc tgcccacgcg 180  
accttctacg gcgggcgggg cgggtccggc accacggcgg gcgcgtgcgg gtacaaggac 240  
acgcgcgagc aggggtacgg cgtgcagacg gtggctgtga gcacggtgtt gtttggcgat 300  
ggcgcggcct gcggcggtg ctacgaggtg cggtgctgg acagcccag cgggtgcaag 360  
cccgacgcgg cggcgctggt ggtgacggcg accgacctgt gcccgnccaa ggacaagtgg 420  
tgcaagccgc cgc 433

<210> 3187  
<211> 427  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-F12

<400> 3187

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tcctgtacga agacgaggac cgggacaagg tgggtgctgc gtcggacgac gacctcgcgg 120  
cggcggtgga acacgccagg ctgcgccgat ggaaggggtct gaagctgttc ctggactact 180  
ccggcaccac cgggcgcagg aaagcgggtg ccaccccacg tggcgccatg gcggtgggca 240  
tgtccagccg ggacgcgtgg gcggcggcgt acagcggggg cgcgcgccgg gctgccctcg 300  
tcaactggcat cggcgtcatg gcgtacctgc gaagatctgc ctagctagtg tgggtggcgcg 360  
gcggcgcggc gcgcatattc gccaatgcaa gagcaagggg tcctgtcctg cctttcgaat 420  
cacacag 427

<210> 3188  
<211> 415  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-F2

<400> 3188

accggtgcag aattcccggg acgaccacg cgtccacggc cgtcgagcga gcagtctccc 60  
aattccaccc aataactaat aacatctcct cgaacgccag gttccttga ccactatata 120  
caggagcgac gaagtgatcc acccgccagc catggagatg aagaaggtcc tctgcgccgc 180

cctcgtcgcc gccgcctcgg ccaccgccgt gctggcctcg gtcgcctccg aggcgccttc 240  
cgaggcgccc gccggcgcg ccggtggtgc ggctggccct agcgcaagcg gcgccgccgc 300  
cgccgccgtg cccgcgcgcg gggcgctcgt cgcctccttc ctgcctact acctccactg 360  
agcgacgacg cgcgggggcg caacgttggg atgcacgtg tttggttcat ccgat 415

<210> 3189  
<211> 381  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-051-Q1-E1-F3

<400> 3189

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cggggtcacg ctgctcaact ccaagttctt ccacatgaac atgtaccggt gcaaggacat 120  
gctgatcaag gacgtgaccg tgacggcgcc cggggacagc cccaacacgg atggcatcca 180  
catggggcagc tcacccggga tcacgatcac caacaccgtc attggcgctc gtgacgactg 240  
catctccatc ggccccggga cctccaaggt gaacatcacc ggcgtagact gcggccctgg 300  
ccacggcatc agcatcggca gcctanggcg gtacaaggac gagaaggacg tcacggacat 360  
caacgtcaag gattgcactc t 381

<210> 3190  
<211> 377  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-051-Q1-E1-F4

<400> 3190

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nattatacat cactagttta cgcaagagct tgctcaaaaa gagagtacat gggattacta 120  
ctcctcccta tacatcgatc gatacaagta caaggcgcg gcgcagcggc gtgccatgcc 180  
ggttcaagcg cgcgcccggc catgtgcgcg cgtgttgggc ccgggcacat caaaagctcg 240  
gtacgacgcc gtagccgaag tcgagcacat atgacatcgg cacggcgggc tcggcctcgg 300

cctcagcgtc gtcnegctcg gcgtcnccgt cgtggtcagc acgcttggca aaccggccct 360  
 tgatttcgcg gcgctct 377

<210> 3191  
 <211> 268  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C8

<400> 3191

ccacgcgtca ggtggaaact ggaccgccct tgcgctgatg tggaagacaa ctccgattac 60  
 gatatttttc ttgttgacat tgatgccttt gctggacccc cctggcctct tgttgttcaa 120  
 ttggaacttc agaaacagct gcgctgttat catctctgca ttgttcgggt tccttcttca 180  
 gtggctctggg gctttggcac tcggcgcgac gtcagctttg tctcatgttg tgctgggcca 240  
 attcaaaacg atcgtcatca tgctctcc 268

<210> 3192  
 <211> 414  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C9

<400> 3192

ccacgcgtcc gcggacgcgt gggcggacgc gtgggcgtcg acgccggcct ctctctcac 60  
 ccgctcggac agtcggagcc cggcggccgg agggcgacgt cgtccctaata agataactaat 120  
 aatttatcac tatacataac caatatataa gccatgggca agcgcagcgt ccctcggtac 180  
 cctgaggacg aggacaaagg cggtgctgc ggctgcctgt gctggtgctg ctgcttcctg 240  
 ttgttcatcg tggcggcgct ggccggcacg gccgcctact tcttcttcgt gtacaagccc 300  
 atggcgccgt cctactccgt gagcaacatg tccgtctcgc agttcgactt cagcacctcc 360  
 gacctgacgc tgtacgtcaa gctcaccgcc tccgtgcgcg ccgagaaccc caac 414

<210> 3193  
 <211> 237  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D1

<400> 3193

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atgtacgtga cattgttgta gaatagaaga gaagtatttc cccttccaaa caaacagaaa 120  
agaagggaaa acgaagtctg taatcgtagt atcgaacaca caatcatgtt tccctttcct 180  
cgatcctctc ttcttcccaa accgagaggt gaaccagcag cctccaataa aaggcca 237

<210> 3194

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D10

<400> 3194

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ccatagctag ccagcatggc gccagcagc agcatagcag tactgctgct cctcgtcgtc 120  
gccgtcgtcc tctccaacgt cccctcctcg ggcgccttg cctcctcgtc gtcgtctctg 180  
ctgcaccagt cgtctccgtc tgagagttag actgagaccg acagtagcag cggagaatct 240  
tcttcgtcgt cgtcgtcggg agaggccggc gagaaggaga aggagaagga gcaggagatg 300  
gagaaggcgg tcgcggcgga gaaggctgcc cagcaggagc tgctcaagta cgccaaggag 360  
aagggcacgt tgtcaccgac caacggcacg ggggtggtaca agggcatcgc ccggga 416

<210> 3195

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D11

<400> 3195

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gatggtcagg tgatcaccat tggggcagag aggttcagat gccctgaggt cctcttccag 120  
ccttccttca ttggtatgga agctcctgac atccatgaga ccacctacaa ctccatcatg 180  
aagtgcgatg tctacatcac gaaggacttg tatggtaaca ttgtgctcag tgggtggcacg 240

accatgttcc ctggtattgc ggaccgtatg agcaaggata tcaactgccct tgcgccgagc 300  
 agcatgaata tcaaggtggg ggcaccgcct gagaggacat acagtgtctg gataggacga 360  
 tcgatccttg cctcgtctgag caccttccaa cagatgtgga tctcaaacgc tgagtat 417

<210> 3196  
 <211> 303  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D2

<400> 3196

taccgctcta gaattcccag gccgaccac gcgtccagcg tcgccgagcc atgacgatga 60  
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 ctttccgcgg agggcggaggc ggaggctacg gcgggttggg ggccggtggc ggaggcggcg 180  
 gcggcggtta ctccaccccg agcgaggcag cgccatccac gcctgccgct ggggagacga 240  
 cgaccccttc gtcaggcggc ggttactcca cccctagcga ggcagcgcca tccagcctg 300  
 ccg 303

<210> 3197  
 <211> 309  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D3

<400> 3197

tacggctcta gaattcctgg gtcgaccac gcgtccacac cgacaccgcc gccggctgcc 60  
 ctccatctcc tcgccgtgc ctctcgtttc tcttttcaat aatcaagatg agccgtgggtg 120  
 gtagtgccgg tgggtgtcaa agttctctgg gttatctctt tggaagcggg gagcccccca 180  
 aaccagcagt ggcaccagct gcaagtgtc cacctgttga gaaaccatct gctgcaaaga 240  
 ctgatgcggc caagcaggtt gctgctgggg ttaccagcca aaccaataac taccacaggg 300  
 gctgatggt 309

<210> 3198  
 <211> 303  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D5

<400> 3198

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tgctgtgaag caagcgtgca aatttgcaaa agatcatgct gttgcaaag gcccaattgt 120  
ccttgagatg gataacctaca ggtaccatgg ccactctatg tcagatccag gaagcactta 180  
ccgcaccagg gatgagattt cagggtgcag gcaggaacgg gacccaattg aaagggttag 240  
aaagtgtctt ttggctcacg acttggcaac tgctgctgag ctcaaggata tggagaaaaa 300  
gaa 303

<210> 3199

<211> 309

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D6

<400> 3199

acgccggcag gtaccggtct agaattcccg ggccgaccca cgcgtccgcg tcattctcttc 60  
gccttcgcta cgcaattccg atccacgctg cgggccactt gtgacgactg gcggaaccgg 120  
cgagaaacag aggcggggcga gcggcgatcg gagatggcgc cggagaagcc ccggaaggaa 180  
caggaggagg agttgatgct ggaggatgga ggcacgagg agagcccgcg ccgcagcttc 240  
gaggactgcg gcgactccga ggaggaccgc ggggagggcg atgacgagga ggagcgggac 300  
agcgaccgc 309

<210> 3200

<211> 359

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-058-Q1-E1-D7

<400> 3200

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actgggaggg accaagtaca tggatcatcca aggcgaacct ggagctgtca tccgtggcaa 120

gaaggggatcc gggggcatca ctgtgaagaa aacagggcag tcactcatca ttggcatcta 180  
cgacgagccc atgactcccg ggcagtgcaa cctgggtggg gaaaggctgg gcgactacct 240  
gctcgaacag gggatgtaat gacaaccctt tcccctggaa tgcattgtga tgatgtttgc 300  
ctgggggttt ttccccccaa anaaaccccc cttttttttt cccccggggg ggtttttttt 359

<210> 3201  
<211> 361  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-058-Q1-E1-D8

<400> 3201

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ttagcagaag aacacacagg gtgacaacaa atccttggtc ggttatttct aatacatatg 120  
gattggatga gattggaaaa aattaagaag aagtttaact tgtttgcgat tcaaacacat 180  
ccaatctcat tcaattcaca tggattgaga gctaaccgaa caagcctgta gttggacaag 240  
ggtgtaacac ttatttgtca ggcgtaccgg gcacagaccg cttcctatatt gttcngtggg 300  
ggaantggnn tttaaaaaan cccnnttggg nnnttttaaa aaaaaaaggg gggccccccc 360  
c 361

<210> 3202  
<211> 412  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-058-Q1-E1-D9

<400> 3202

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tcgcgctggt cctcgtggcc acggccatag ccgccgctcc cggcggttggg tttgtcgtca 120  
ccggccgcat ctactgcgac aactgccgag ccgggttcga gacaaacgtg tcccacgcca 180  
tccaaggcgc gacggtggag atggagtgcc gccacttcga gtcgcagcag gtccacgaca 240  
aggcggaggc gacgacgggc cccggcggct ggtacaggat ggagatcagc ggcgaccacc 300



aggacgagat ctgcgacgtg cgctgtctca agagccccga ggcggaactgc gccgagatcg 360  
accactccccg cgaccgctgc cgcgtcncgc tcacccgcaa cgacggcatc aa 412

<210> 3203  
<211> 306  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-E1

<400> 3203

taccgctcta gaattcccag gccgacccac gcgtccagag agacgcaggc ccgccggcga 60  
cgatcgagga gggaggaacg ccagagaccc ggcgggcgcg acgatggctc cgcgcagctc 120  
atcgggcgcg acgtgectgt gctcgtctct cgccgcgggc acgtggcg c tggcccacgg 180  
ggcgcaagga ggaggaccat cggcatcggc ggcggaacctg gacaaggta c gcccgagac 240  
cttcctcgac atcgagatcg acggcaagcc tgcaggccgg atcgtgctgg gactgtttgg 300  
ggacac 306

<210> 3204  
<211> 402  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-058-Q1-E1-E10

<400> 3204

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tgttctctct ggtcctcttc tgcacgtgc atggtgagaa ggaagagtca aagggcatcg 120  
atgcgaaagc gtccgggcct ggtgggtcct tcgacatcac caagttgggc gcctccggca 180  
atggcaagac agacagcacg aaggctgtgc aggaggcatg ggcacggcg tgcggcgga 240  
ctgggaagca gacaatcctc atacccaagg gtgacttcct tgcgggacaa ctcaacttca 300  
cagggccttg caagggcgac gtgaccatcc aggtggatgg caatctgctg gcgaccacgg 360  
gacctaagcc agtacanagg acatggtaat tggatcgaga tt 402

<210> 3205

<211> 129  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-058-Q1-E1-E11  
  
 <400> 3205  
  
 ttctctatag tgagtcgtat tagttatcgc ttgcacgtac aatgcgatga gaggccttgtt 60  
 cctcctgttc ctcttctgca tcttgcattg tcataatgaa gattcagggg tcatgggggc 120  
 gaaagcttc 129

<210> 3206  
 <211> 412  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-058-Q1-E1-E12  
  
 <400> 3206  
  
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 tgctgctcgt cgggctcgc gcgggctccg aggaggagga ggacggcggc ggcaaaaaga 120  
 agccccacgt caaccacggc aagtttaagg cggagccgtg gacggacggg caccgcacgt 180  
 actacggccg ggcgccacgg ttaactgac acaacggaca gcggcccgtg cggctacaag 240  
 ggcgagctgg ggaaagacta cggcaccctg acggcggccg tgggcccgtc gctgtacacc 300  
 aacggcaccg ggtgcggcgc gtgctacgag ctcaagggcc ccaagggcac cgtgggtggtg 360  
 acggccacca acgaggcccc gccgccggtg agcgggcaga agggcgagca ct 412

<210> 3207  
 <211> 310  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-058-Q1-E1-E2  
  
 <400> 3207  
  
 cccaggccga cccacgcgtc cactcgaagc cgaaggactc gtgccttctc ttcttccttg 60  
 gcatggagga agtagctgtt tcgcctatga tcgttgccgc cgtagtgtg gacaacaatg 120  
 gcgctgacgc ggtctcctgc actgccatcc ctacgctaac aataagccta gaggagaaag 180

aaaatatcaa tggggatggt cccacgatca cctcggccgc aagcaacgag gaggaggcgt 240  
 tgttcagtgt cggagaatcc accaaggacg atggccatcg cttgacgaat ggaatggcct 300  
 tcccccaaaa 310

<210> 3208  
 <211> 332  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-058-Q1-E1-E5

<400> 3208

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 ggcgggctcg gctcggcccc ctccagcctg ctgctccacc tgctcctcct ccaactccctc 120  
 ttatagcctc cagcctcccc tcgcctcccg ccacccccta tggcgcgcgt tttcttccac 180  
 cacgtcgctg ggcacctcac cgtcggcaag cccgaggctg ccgagctgca cgacaccgac 240  
 acgctcgacg acgccgcgcg cgccatcgcc gccnagcccc cggaaggggg gggggcccg 300  
 gcccccccg ggggtttttg gggggccccc cc 332

<210> 3209  
 <211> 272  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-E6

<400> 3209

ccacgcgtcc gccgagaagg ggtccgggat ggccaccttc gtgcaccgca agtacagcga 60  
 caaggaggac agcgacatgt tcaggtgcta cgacagctgc tccgacgacg tggaggaggc 120  
 cgtcgccac ctcaacggcc tcgtccggga gccaccgac gccaagttcc tcgagctcaa 180  
 gtcgtggctc tcctccacgc tcggcggcac ctccacctgc gaggacgcct gcaaggacct 240  
 gcccaagacc agcgacaagg acgacgtcgt ca 272

<210> 3210  
 <211> 273  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-E7

<400> 3210

ccacgcgtcc gcggacgcgt ccgcccacgc gtccgggtgg tcaagatgta ctgggggtgac 60  
ccgagggaga aggtgtgcga cgcggtggag gagctccaga tcgagtcgct cgatcatgggc 120  
agccgcggcc tcggccagat ccaaaggatt ctgctgggaa gtgtgacgaa ctacgtgctg 180  
tccaatgcgt catgccccgt gaccgtcgtc aagtogaagt agtggctctg gcctttcatt 240  
tccagaaaga tgaatctgca gtaacctat acg 273

<210> 3211

<211> 270

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-E8

<400> 3211

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caacaccagc atggtgctcc gcctcggagc atgcgcggag tacggctgtc tcgtatatca 120  
ttacatggat cactggagca tcaacgaacg gctgttatgt cggggcagca cgccacctct 180  
cgcgtagacc tagcggttca ggatcgcagc tgagatcaca acagcgcagt tgttccttgc 240  
acacacgaag ccagagccgc tgggtgcaccg 270

<210> 3212

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-E9

<400> 3212

ccacgcgtcc gcgacgagcc agggcacctc gcgccgacag gcctgttcct cggacctacc 60  
aagtacatgg tcatccaagg cgagcctggg gccgtcatcc gtggcaagaa gggatcagga 120  
ggcatcaccg tgaagaagac agggcaggca ctcgtggttg gcatctacga cgagccgatg 180  
acgcctgggc agtgcaacat ggtggtggaa aggctgggag actacctgct tgaacagggc 240  
atgtaactac tacgtaccag ctggaatgca tgtcgacgac gatggtttcg agtttcgact 300

tccaataata gtaacaacaa agcaaaggcc ttctctcccg cgtatttgct ttggctcttc 360  
 ttctccacgc cataagatat ctagcaattg gtgactcgcc ttaattagtt cgcttttg 417

<210> 3213  
 <211> 338  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-058-Q1-E1-F1

<400> 3213

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 gcgcgtggta caccgacaacc acggcaagtt caccggccggg ccgtggaaac cagcccacgc 180  
 gaccttctac ggcggggcggg acgggtccgg caccacggcg gcgcgtgcc ggtacaagga 240  
 caccgcgcgcg caggggtacg gcgtgcagac ggggtggcgt gagcaacggg ggttgggnnt 300  
 ttttgggggt tttttttttt tggggggggg gggccccc 338

<210> 3214  
 <211> 437  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-058-Q1-E1-F10

<400> 3214

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 gcgggcggca gcctgcggtc gcagcggcag gcgtgctgcg agccgtcggg ggcgcgcgtc 120  
 cgggcggtgt tcgctgccg gccgcggcg tcggggagcg cggccgacct ggcctccggg 180  
 ggcaggaggt cgtccggcgt gccggtgttc gtcattgatgc cgtggacac cgtcaaggag 240  
 tgcggcaccg cgctgcaccg ccgcaaggcg gtgcaggcca gcctctccgc gctcaagagc 300  
 gcgggcgtcg agggcgcat ggtggacgtg tgggtggggc tcgccgagcg cgacggcccc 360  
 ggccggtaca acttcgcggg ctacgcggag ctcatggaga tggcgcgna agccgggctc 420  
 aaggtccagg ccgtcat 437

<210> 3215  
<211> 413  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-F11

<400> 3215

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attttagaag aaacagctcc agaggagctt cagaaccatg tcacagtga gcttcccggtg 120  
gtggagggttc tccttgagat tgcaaaattc tgtgatgtgt atttgatgga gcgcattctt 180  
gatgatgaga gtgagggaaa ggttttatcg gccctgagtg aagctgggct ttttgggtgt 240  
ggtggcttga taaaagataa ggttctcttc tgtagcacgg agaatggccg tacatctttt 300  
gttcggcaac tcgagcctga ttggcatatc gacacaagtc ctgaagttgt tcaccaatta 360  
gctaggttta tcaaatatca actgcacatc tccccgcagc gacctgaaag aat 413

<210> 3216  
<211> 414  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-F12

<400> 3216

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ctctgggaga tgatgtgggc tctagaatac gaccctgaca ttttcttcgc aacatgcgaa 120  
gaacaagggtg cagtacataa aaataaagtt tctaaatcca aactgaaagg actgcgccat 180  
tttggcaagt gggataagga caaggataag gaagatgata agaatggggc tgaggacggt 240  
gaagatggtc cggttccgat ttcagtcttc atggttgcaa gtgtcctcaa ggagaagaga 300  
gaaaagctgt tacaagaagc cagaggactg gatgatctta tcaggatatt gaacgatgta 360  
aatgggaact tagatgctaa gaaagcttgc gctggagcat tgaaacttca caaa 414

<210> 3217  
<211> 353  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-058-Q1-E1-F3

<400> 3217

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gccctgccgc tctacggctg caggctctgc gctgtgcatg atgccatcat cttctgccac 120  
tgctgtgacg ccaggctgtg cctgcactgc gacgccgcgc tgcacggggc taccgaggcg 180  
ggggcgctcc accgcgcgc ccggctctgc gacgcgtgcg gcgccgcgc gccgcgctg 240  
cgctgcgacg gcaccgtgac gctgtgcgcc gtgtgcgtcg gccgcggtgc tccnngcggt 300  
tgggaaacccc cncgcggggg ccaaaaaaac ccccccccc cccggggggc ccc 353

<210> 3218  
<211> 291  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-F4

<400> 3218

attcccaggt cgaccacgc gtccgctgag catcccaggg acggcgacaa atgggggtcgg 60  
gagatccatc gtgtctgcga atctgcgtgc ttgccgttgc ggcggtatgg aacggggacg 120  
ggatagtgcg ggatctgctt tggaaagttt cctaattcct agtactatgc ttttacgcaa 180  
aattgggtcca atttctgtat ggttcctcta aaatgtgctg tccaaacggg gccgtgttct 240  
atgcaataga aatcatgcta ctcttaccat acttcgatgg ttttgcaaa c 291

<210> 3219  
<211> 335  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-058-Q1-E1-F5

<400> 3219

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ggcgtcttga tatattggat tgcactgcat gctttgcttg ctagttttat ttgaactctg 120  
taaagatgta gccatctcct ggcgagtgc tgtacgtac tctgtgtcta tagcaagtta 180

tatctaaaca gaagcagttt gcactgatac cgtgattcct ttcgaaaatg ttaccgaata 240  
 cttgagccgt attggcagct gcagaaatct tcaaatgaat ggccaaantt tttttttttt 300  
 tccccaaaac ccnccccccc ccccnctttt ttttt 335

<210> 3220  
 <211> 270  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-F6

<400> 3220

ccacgcgtcc ggcggcatcc tgcagataga ggcacagggt ctgctgaaac ataaggactg 60  
 cgctcgtgtgg atcactgggc tacgcggttc acgtgatgtc tgcaaaagct gatctcgtca 120  
 gatttaatta cgagcacaga tacttccttt tatatgtata cacctgtctg acagtctgtc 180  
 agtccgtcag tcttgacttg atgagggaaa agcacactcg cgtgcgcgct gagccgcgag 240  
 ctgtatcgca taggccacct cacgtacgtc 270

<210> 3221  
 <211> 272  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-F7

<400> 3221

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 gacgggcagg gccagctgt gtggagcaag aactcctgca ccaagaagta cgactgcaag 120  
 atccttccca actcgtcgtt gatggacttc gtgaacaacg gggaggtgtc cggggtcacg 180  
 ctgctcaact ccaagttctt ccacatgaac atgtaccggt gcaaggacat gctgatcaag 240  
 gacgtgaccg tgacggcgcc cggggacagc cc 272

<210> 3222  
 <211> 302  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations



<223> Clone ID: LIB148-058-Q1-E1-F8

<400> 3222

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ccgcccaggg aaacccgccca acgactacac ccgcggtgc aacctgatca ccggtgtcg 180  
cggctgatca tatctctctg gtcgatgtgc gcgcaatgtc aatgtcgcac gcgctgcag 240  
gtaccaggcc ttagcgtgtg gtgccgctg tgtgtatata ttacacacna tgcattatac 300  
at 302

<210> 3223

<211> 452

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-F9

<400> 3223

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cagacatacg tcgatgagca cctgatgtgc gagatcgagg gccaccacct gacctccgct 180  
gccatagtgc gccacgacgg cgccgttttg gccagagca ccgcattccc acagttcaag 240  
acagaggaga tgaccaacat catgaaggac ttcgacgagc ccgggttcct tgccccgacc 300  
ggcctcttcc tcggccccac caagtacatg gtcacccaag gcgagcccgg cgctgtcatc 360  
cgcggaaga aggatctgg aggcataact gtgaagaaga cagggaagc gatggtggtc 420  
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<210> 3224

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G10

<400> 3224

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gtggccttgc tgagcgtggc cctagtgggc ctgctcctct gccacctcgc caccaccgcc 120  
 tccgcccacc agaaagacat ccacgtcctc ggcagcgtcg acggctccag cgacggcagc 180  
 agccccgagt ccgaaggccg cgtcgtctac gcggacatga agctggctga tacggaatcc 240  
 gatgcgcggg cgccggcgcc ggcgccggg cgcgtcgtcg gttgaactga gaagcgtgcg 300  
 tccagccaag caaggtggtc aaaaccgaga actaattaag ggctcgatcg tgtgtcaggc 360  
 tactactgtt cttgccataa ttatatatag atacgcaaag tgtggccaag cctaccc 417

<210> 3225  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G11

<400> 3225

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 acacgacaac cacggcaagt tcacggccgg gccgtggaaa ccagcccacg cgaccttcta 180  
 cggcgggcgg gacgggtccg gcaccacggc gggcgcgctg ggtacaagg acacgcgcgc 240  
 gcaggggtac ggcgtgcaga cgggtggcgt gagcacggtg ttgtttggcg acggcgcggc 300  
 ctgcggcggg tgctacgagg tgcggtgcgt ggacagcccc agcgggtgca agcccagcgc 360  
 ggcggcgctg gtggtgacgg cgaccgacct gtgccaccc aaggacaagt ggtgc 415

<210> 3226  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G12

<400> 3226

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 cgaggggtcaa gaagcttctc ggactcgccc tgtcgcgcct cgccattgca cgccgtcccc 180  
 gccttgctcg caggtccatc tgccgtaacg atgtcggcca gctcctctcc ctcggctacc 240

tccatcgcgc tctcctccgc gcagagcagg tcatagagga ggataacatg ctgcaggcgt 300  
 tcgacatcat tgagctctgc tgcaagcgac tcgtcgagca cgcaacacat ttagacaaac 360  
 cgcgggagtg cggcgaagag ataagggagg cggctgccgg gatcatgttt gcag 414

<210> 3227  
 <211> 363  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G3

<400> 3227

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 tcgccgttgc tgccctcagc gcggccgagg ccccggcaga gtcaccgaag gaaggcagtg 180  
 ctgccaaggc acctgaggct gccaaagaaa ctgctgcccc cgctgaagca cccggagccg 240  
 cgtccaaccc cgtcgccgcc ggctggccca tcatcgtcgt ctaggaagtc tgggtccagct 300  
 accgcgccag gccaaaccgg gccccccctt tcccccttta aaaaccccaa aaaaccccccc 360  
 ccc 363

<210> 3228  
 <211> 294  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G4

<400> 3228

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 agtcggccat tctgggcaag gacagaatct gggatcttcc ggtccgtatt gagggctgat 180  
 cccaattttg acgattcacc atggccttca gtatcggctg aggctaagga ttttgtgaag 240  
 agattttctga acaaagatta ccgcaaaaga atgactgctg tccaagcact gact 294

<210> 3229  
 <211> 367  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G5

<400> 3229

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gggagagaaa acggggcgga tccccaccgc ctgcgcgcgc gcggcgggcg cggcggcggc 120

ggcggcaatg gaggtcacct cctccccctc gccttcgcga ccgcgcgcgc ctcctcgaa 180

gccggcgctc caactcaacc ccgcggacgt ctcctccgt cgctgcga ccccgacccc 240

aacagcggcg acaccgtca ccgcgacggc gcccccgcg cagcccgcca ccgcatccaa 300

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ccccccc 367

<210> 3230

<211> 69

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G6

<400> 3230

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cacctcgtc 69

<210> 3231

<211> 295

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G7

<400> 3231

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cgtcccgccc gccgcgcgc ccgcattcag ggatggagat gaagaagatc gcctgcgcgc 180

tcctcgtcgc cgctcggcg gccaccgtgg cgctcgcgc ggaggctccg gctccgggccc 240

ccaccagcgg ctctccgcc gtcgcgcgc ccgtcggcgc cgccctcggg gccgc 295

<210> 3232  
<211> 417  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G9

<400> 3232

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gccgtgagga ctccggcgaa tggcgctccg cgctgcctcg ggcctcctcc gccgcgcgc 120  
cgtcgccact ctagggctac taaggagtca tacacatgtc agaaactaca gcagtcaact 180  
ttcagctttg attccagcta cttctcaatg ctcaaactcg acaagaagac gctattactt 240  
acctaatacca tctctgtacc aagtttgag taggtcattt gcctcagaca gcggagacaa 300  
gttcgagget gttgtgccct tcatgggtga atctgtaact gatggaactc ttgctaactt 360  
cttaaagaag cctggagaca gattcgaggc cgatgaaccc atagcgaga ttgaaac 417

<210> 3233  
<211> 279  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-H1

<400> 3233

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cggcatggac atcaaggac ccacggcgca gtccaagcac agcaaggcaa aggccgaagc 120  
tgttatgtgc caaccagcga gcgcgttct gcccgtcatt gacgagcgt aacgcgcgt 180  
gacggcgagg accgcgccga tccccggcg gacggtggag aacaacaagt tctgcctctc 240  
cgtccacttc cgctgcgtcc aggaggagaa atggcgcg 279

<210> 3234  
<211> 108  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-H10

<400> 3234

ttacaacacc ctatagttag tcgtattaaa tgctcgcttc gcgcctcgtc ctctccctgt 60  
acacgatcgt ctgcttggat gtgctctggg ggccctcgca tatcgctt 108

<210> 3235  
<211> 410  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-H11

<400> 3235

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ttgtgcaaga gcgtcttcag aagtcagcgc catacaaaat gatcatggag ctgagtgcaa 120  
tggagctgga ggctcaagaa atatcgttcg aggagcttct ggctcgggag aaggaggaca 180  
ctgcctttctg gcagcgcaac gggaagatga gatcagtcct atccaagtag gacacaatgc 240  
ccctgctact tgggctcact gacgatagca gaccttcaac atcggtagtg tctaggcatg 300  
aaaccctttg gagcagctgc tgcattgctg catcgaaccg tttgggtgtaa cgccgcggcc 360  
ttctgtcaag atcctgcctt gattctgggc agattgagtt gtgtcgtgat 410

<210> 3236  
<211> 422  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-H12

<400> 3236

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cctgaacatg gcgacgcttc ttgatcctac caggacttat ccttacagat acagagcagc 120  
tgtactgatg gacgagggca aagaggatga ggcgatcgcg gagctgtcag gagccatagc 180  
tttcaagccg gacctccagc tgctccacct ccgcgcggcg ttcttcgact ccatgggcga 240  
gcgcgagagc gccctgcggg actgcgagge cgcgctctgc ctggaccgga cccacggcga 300  
cacattggag ctgtacagca aagcctccac caccaatgcc gaaccccgaga gctaggcagc 360  
cagccagccg gccggccggc aggcgcggcg tctcctcgtc gtcgattcag ctgcggtttt 420  
tg 422

<210> 3237  
 <211> 367  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-058-Q1-E1-H3  
  
 <400> 3237

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 caagtatgcc actccctggg tggcggcact ggttctggca tgggcacgct gtcacatctcc 120  
 aagatccggg aggagtaccc agaccgcatg atgctgacct tctccgtgtt cccgtcgccc 180  
 aagggtgtccg acaccgtcgt ggagccctac aacgcgacgc tgtccgtgca ccagctggtg 240  
 gagaacgccg acgagtgcac ggtccttgac aacgaggcgc tctatgatat ttgcttccgc 300  
 accctcaaag ctttcaaacc ccaaaaaaaaa accccccccc ccccnttttt tttttccccc 360  
 acaaaaa 367

<210> 3238  
 <211> 301  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-058-Q1-E1-H5  
  
 <400> 3238

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 ggactcagcc aaccccatct tcacgacat gaagtactgc cccaacaagt tgtgtactgc 120  
 caacggcgcc tccaagggtca cgtcaagga catcaccttc aagaacatca ctggcacctc 180  
 ctccaccccg gaggccatta gctgctctg cactgccaaag gtcccatgca ccggcgtcac 240  
 catggatgac gtcaacgtcg agtatagtgg caccaacaac aagaccaatg gctatatgca 300  
 c 301

<210> 3239  
 <211> 256  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-058-Q1-E1-H6

<400> 3239

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tccacaggta cgggcgctcc tgtaacggc agtcacgtgc gcgaatagca acgctcaact 120  
gacagcctag agtcccatga cgagggtcgg catcgctcca atcttcatcg actgtactgg 180  
ctgcggcaca tgctacgacg tgaaatgcag cgaagaagct aactgctccg gcaagccact 240  
caacgtctgc atcact 256

<210> 3240

<211> 332

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-058-Q1-E1-H7

<400> 3240

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gacacccttg cgcattgacct gcacacctct gactgcctgc atgagctccg gcccggcgac 120  
cacatcgaga ttcagtggag aaggaacaaa gaattcccat acggctggtg gtatggagtt 180  
gttggggcact tggagtcatt tgatggaagc gaacactttt gtcggtgcca tcttagtgat 240  
accgtggtgc tggagtttaa tcagtacacg ccggggtcaa ggtggaggca agcngttggt 300  
gaaaaaccgg gggnaaaaaa aggggggggga aa 332

<210> 3241

<211> 361

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-058-Q1-E1-H8

<400> 3241

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ctcgctctct cgtctcccc taggggatcg tcggagagga atcgcaaaga gggccgtctc 120  
atccgagtta aggaagccat ggagcacaag gaggctgggt gccaggcccc cgagggaacc 180  
atctcttgca tcaataactg tggtttcttc ggcagcgcg cgaccatgaa catgtgtctc 240



aagtgccaca aggagatgat aacgaagcag gatcaggcca agctgggtgc ctcctctaaa 300  
tcggacaggg ccaaantttc cgggntttt tgggaaaaaa aaaaaccccc cggggggggg 360  
g 361

<210> 3242  
<211> 395  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-A10

<400> 3242

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ctgcgatgac tatctgtatg gcgagtcgct atacttacgc agacataagc tgctccgacg 180  
tgtcttccgg acgcgtgggg ccgtgggcga gtgctgcgta gacgaggagg acgagctcgg 240  
gctgatcggc ggcggcggca tcagcgccgg cgacgcgctg ctacggacgc ttgcgcagct 300  
caagctgacc aagcgtata tcagcgacgc ggcgtgctc gcggaccatc tgccgtgcaa 360  
caagctcggc cggctctact acaccaactg cgcgg 395

<210> 3243  
<211> 345  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-A11

<400> 3243

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ccgcgcgctc gattcgtcg cgcgccatc cagggtccag ccggccgcgc gcccgcgccc 120  
ccctgccggc ggccgtgcca tgccgcagcg gggctatact gcggtggtcc ccattgaggt 180  
ggcgtgcgcc ggcggccgtc gacgccatca gcggcgcatg agacatcgac acccgaggtc 240  
aagggccgga cgtaccgctc cggatcggtg tcgctgtca ccgcgtccct cgcgggcgtt 300  
aaggctcgtg tggagtccgg tcccgtccct agcgcgcgc ttcag 345

<210> 3244  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-A12

<400> 3244

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gacttcgacg agccagggca cctcgcgccg acaggcctgt tcctcggacc taccaagtac  180
atgggtcatcc aaggcgagcc tggtgccgtc atccgtggca agaagggatc aggaggcatc  240
accgtgaaga agacagggca ggcactcgtg gttggcatct acgacgagcc gatgacgcct  300
gggcagtgca acatggtggt ggaaaggctg ggcgactacc tgcttgaaca gggcatgtaa  360
ctactacgta ccagctggaa tgcattgtcg cgacgatggt ttcgagtttc gacttccaat  420
aatagt                                           426
  
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<210> 3245  
 <211> 405  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-A5

<400> 3245

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tgggtgcggtc ctcccaaagt ccccccaggc aagaacatca cggccaccta tggcaaggac  180
tggctggacg ctaaagcgac atggatatgg aagccgacgg gtgccgggtc cgacgataac  240
ggtggcggtc gcgggtacaa ggacgtgaac aagccccctt tcaatagcat gggcgcatgc  300
ggcaacatcc ccattctcaa ggatgggtct ggttggtgggt cctgcttcga gatcaagtgc  360
gataagcctg tggagtgtc cggaagccc gtggtggtgc acatc                                           405
  
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<210> 3246  
 <211> 286  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-A6

<400> 3246

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gcacaggttg cgatggttgt ggcgttggtg ttcttggtga gcggcgcatg gtgcagtcgt 120  
cgcacagtcg gtccatgcaa gaagatcacg gtcatttatg gcaaggactg gctggacgct 180  
aaggcgacat ggtatggcac gcgcacgggt gcatgtocca actataaccg tgggggcccgc 240  
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<210> 3247

<211> 363

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-A7

<400> 3247

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ccgccgccgc aacctcgaag gaggaggagg aggtggagtc gcccaagaaa ggagcggctc 120  
tgtcgccggt gccggaggct atcgatcatg ccacagccgc aacctcgaag gaggaggagg 180  
aggaggtgga gtcgcccaag aaagaagcgg ctctgtcgcc ggccgccggag cctatcgatca 240  
tcgccgccgc cttaacctcg aaggacgatg aggaggtgga atcgcccaag aaagaagcgg 300  
ctctgtcgcc ggccgccggc cgggaggcca tcgttgccgt agcagcagtg gaagacgtgg 360  
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<210> 3248

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-A8

<400> 3248

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gttctgaac atcaggaagc cgttcattcac gttccggtcg ggcccccaaga agcccgcgct 180

cgtggtctgg aacgacactg caggcacaag cggcatcgac ggcaagccgg tgggcacggt 240  
 ggggagcgcc acgctggcgg tggagtcgga ctacttcacg gcgtacggcg tgggtgttccg 300  
 gaacgacgcg ccgctggaca agcccggcgc caagggcgga caggcgggtg ccgtgcggct 360  
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<210> 3249  
 <211> 411  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-043-Q1-E1-E11  
 <400> 3249

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 ggggacanga aatcagcggc catggcctcg attccggcga cgaccttcgc cgatcatctta 180  
 tccgtctctt tctgtgccgc ngctggcacc gccgtcgaca acgacctccc cgactacgtc 240  
 atccaaggcc gcgtctattg cgacacctgc cgcgcggggt tcgtgaccaa tgtcaccgag 300  
 tacatcgagg gcgccaagggt gaggtgggag tgcaagcact tcggcaccgg caagctcgag 360  
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<210> 3250  
 <211> 430  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-043-Q1-E1-E2  
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 gtcgtccccg acaaacttgc caagcctctg gcgtcgctgc ccgccgataa ggtgcggccg 180  
 gcgggtggaga accacgtcct tctcagttac ttcgaccca tcaagctgga cgagatgaag 240  
 acacgcaccg ccacctctcc cagctgtctc tccgtcaccg acaagaaact cggcgtctct 300

aactacacca gggccgacga cgggcagatg tacttcggcg ctcccggagc cccctgcgtg 360  
 gccaagctcg tcaaggtegt cgcagcgcgg ccgtactctg tgtccatcat ggagatcagc 420  
 gagcccatTT 430

<210> 3251  
 <211> 399  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E3

<400> 3251

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 acagcgacta cacgactgg ctcatgtacg ccatcagcgg cagcaatgcc cccaccatca 180  
 tcagccatgg caatcgctac atcgcgccgc ccaaccttgc cgcgacgcag gtcataaagc 240  
 agcatgacac gccggagtcg gtgtggaaga actgggtgtg gcactccgag aacgacctcc 300  
 tcatggaatg cgcccaactt aacgtcaacg ggccggcaaaa tcaacaggaa tttcaacact 360  
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<210> 3252  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E5

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 acgtggccac ggccaacgag tcgctgtacc ggagccagga ggtgacgtcg cagctggtgg 180  
 cgctggtgaa caacgtcgtc gtcaacatct ctaaccggaa cttcccgcgc gggctccgcc 240  
 cgctctactt caaccagtcg gggccgctca tgcccgtgct ctgcaaccgc ttcaaccgcg 300  
 acatgagccc ccgccggtgc ggcggggcg aggtcgactt cggcagcgcg gcgcgggagt 360  
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ggcg

424

<210> 3253

<211> 408

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E6

<400> 3253

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gagtgagact gagaccgaca gtagcagcgg agaattctct tcgtcgtcgt cgtcggaaga 180  
ggccggcgag aaggagaagg agaaggagca ggagatggag aaggcggtcg cggcggagaa 240  
ggctgcccag caggagctgc tcaagtacgc caaggagaat ggcatcgtgt caccgaccaa 300  
cggcacgggg tggataaatg gcatcgcccg ggagtctgtg gacgccaca acgagctccg 360  
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<210> 3254

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E7

<400> 3254

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gccgaggctg gcaccgccgt cgacaacgac ctccccgact acgtcatcca gggccgcgtc 180  
tattgcgaca cctgccgcgc cgggttcgtg accaatgtca ccgagtacat cgcgggcgcc 240  
aaggtgaggc tggagtgcaa gcacttcggc accggcaagc tcgagcgtc catcgacggg 300  
gtgaccgacg ggaacggcac gtacacgac gagctcaagg acagccacga ggaggacatc 360  
tgcgaggtgg tcttgggtga gagcccgcgc aaggactgcg accaggtgca ggccggacagg 420  
gaccgcg 427

<210> 3255

<211> 405  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-043-Q1-E1-F1  
  
 <400> 3255  
  
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 acatttcttc ggaaggaggc caccgccccca tgatggatgg cttcgaggag taaaccgcgt 180  
 tctcacaagc atagtaagtt gtatttgcatt tcttaaaatg ttagttgttg atggcagctg 240  
 cacgccagag gcagattgat tgatgttttg cctggagcac cccctccctt ggcggtggcaa 300  
 tgaatcggag tcgaatctcc ttgagaacgt acaggatggc ttatacccac cccactaatc 360  
 tgttattcag ccagcgctat ttttttttgc cccctccgt gtttc 405

<210> 3256  
 <211> 455  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-043-Q1-E1-F10  
  
 <400> 3256  
  
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 tggagtgcc cgggggtgtg tcctgcgcgc acatcctcgc actggcgctg ggcggtgctga 180  
 ttaccatgac cggcgggccc cggtagcccg ttccgctggg gcgcagggac tcgctgtcgt 240  
 cgtcgccac ggcgcccgac gtggagctgc cgcacgcca cttcacctg gaccgcctca 300  
 tccagatgtt cggcgccaag ggggttcacg tgcaggagct ggtggcgctg tccggcgccc 360  
 acacgctggg cttctccac tgcaaggagt tcgcccacg cctctacaac ttccgcaacc 420  
 agggcgggaa gccggagcag ttcgaccca gcatg 455

<210> 3257  
 <211> 402  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F11

<400> 3257

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aaggggttgc agccaaatth ttgtaaaaac attgacgggc aaaactataa ccttgagagt 180  
ggagacctct gacaccattg acaatgtgaa ggccaagatc caggacaagg agggcattcc 240  
cccagaccag cagcgtctga tctttgcggg caagcagctg gaggatggcc gcaactctgc 300  
ggactacaac atccagaagg agagcaccct tcaccttggt ctccgcctca aggggtggtat 360  
gcagatcttt gtgaagaccc tgactggaaa aaccataacc ct 402

<210> 3258

<211> 263

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F12

<400> 3258

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ctccgactaa gcaatggtcg ccgtcgcccg ggctgcaacc gcaacagtac cgctcgcgga 120  
ggaagccgat ccgcgggcac tgccggaaca ttggaccacc gcaaaaaatt acaaggccac 180  
aatggacgcc aaaacccgga aggctttcaa cggcttggtg gccgccgcta cggaaaaaaa 240  
ccggtccaag gcgttgaagg cct 263

<210> 3259

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F2

<400> 3259

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ccggggagaa cgagggtcc gccgctcccg gggaagagcg cgccattgcc gccgccgcgc 120  
tgactgggga atatggttgt ccaagagttc agaattgatc tcaagaagcc ccttgttttc 180



cagcttggac atcttgatga atcgtaccac gacatgggtt caccaatcga ttatcagcaa 240  
 gggaggtcca tgctttttcg gaaatgatgt cctgcagttc atgactcgca cgaagtggta 300  
 ggctgtgcc aactatatggc tgactgttgt ctgctgcctg gccgtgaaat ctattctgat 360  
 gggtcatact gttcaggacg taactatgat ggctctgttt gggatattta ttttgacgct 420  
 gatcgaatac a 431

<210> 3260  
 <211> 421  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-043-Q1-E1-F3

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 gcacctacac gatcgagctc aaggacagcc acgaggagga catctgccaan gtgggtgctgg 180  
 tggccagccc gcgcaaggac tgcgacgagg tccaggcgct cagggaccgc gccggcgctcc 240  
 tgctcaccag gaacgtcggc atctccgaca gcctgcgccc cgccaacccg ctcggctact 300  
 tcaaggacgt gccgtcccc gtctgcgccc cgctgctcaa gcagctggac tcggacgacg 360  
 acgacgacca gtaaactgta ccacggcggc gtcgcgga ggtgcacaa aactataacg 420  
 a 421

<210> 3261  
 <211> 371  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F4

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 tcggcgcggc acatcgggca gctgggtgctc ccgcgcagcc acgtgtcgat gcagtcggcg 180  
 tggaagtagt gcatgcactc ggggagcacc cgcacgacct cgccgtcgtc gaagtcgggc 240

aggcacaccg ggcacgtcga ctggttccag gcctcctcct tgcggtaccg gcacaccacc 300  
gccgcgcccc ccaggacgac gcatgcatgg cgcggcgcgc tagatgtggc ccgcgaogat 360  
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<210> 3262

<211> 400

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F6

<400> 3262

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tctcaaacag gattgggagg gagagcctca aggcggggga tcatatctac tcctggaggg 180  
cggcgtgggt ctacgcgcat cacggaatat atgtgggcga tgataaggtg atccatttca 240  
caagaggaag aggacaggag gtccggaacag gaactgtcgt cgatattatt cttgtgagtt 300  
ccaccccaaa acgaagcaac acgccttgcc cgggtgtgcac cgacgaaacc agcgacagca 360  
gcacagagac gaacggcgtg gtatcctcct gcctcagctg 400

<210> 3263

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F7

<400> 3263

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tggaacctgc cgatgtgaag gtggttgcat gaaggctgac aaaggccctt ggaaggaccc 120  
cgaaatcatg aagatggttc aaagtgggtga tgggaggtgt ggatcactcg gtacggcctc 180  
tttcgaggct ccggagaaaa tgatttgtga agacgacacg tatcctaaga aacaagcttt 240  
gtttgatggg gaaacacaat tagctggaga cgagcattct cagtcacaga aaatttcccg 300  
tggccggatt gaacatcctc acgtgtcacc tcttcacgag gaacttatcc ccaattcaat 360  
tcatacccct ggatcacctt attcttgtga tgtcccg 397

<210> 3264  
<211> 400  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F8

<400> 3264

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cttcttggcg gcctcgtcga cgtacttctg gtagtaggcg acgagcccct tggcgacggc 120  
ctggcggatg gcgtagatct gcgacgtctt cccgccgcct cggacgcgga tcctcatgtc 180  
gatgtccttg aacctggagc gccccgccag caggatgggc tcgaaggcct tgaggcggag 240  
catctccggc ctgatgagct caatcgggac gccgttcacc ttgatcagcc cgcgccccgg 300  
cttgggtgtag gcgacggcca cagccgtctt cttgcgggcg aagcactgga ccgtgccggg 360  
ggtcggggcg tggaacacgg tagacatgtt tgcgaccttg 400

<210> 3265  
<211> 172  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F9

<400> 3265

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acttgtaaat ttgtaatcga ggaagaaaag cacctctcga tcgattaaca tgtctagctg 120  
ctacgacctt gtgattcgac gatgttaatt aatcggcagc tttcattaaa aa 172

<210> 3266  
<211> 420  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
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<400> 3266

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tggagctcac aggcgccgctg ctccggcgat acgcgctgcc gtcggcgctcc ccggtggccg 120  
cgaggggtggg gaggaggagg cgaccagcca ggggtggcctg cgtcgggggc ggggggttcg 180  
cggaggaggg gcacctcagg tactacgagg cggccccgcg gaggaaggcg gtggaggcgg 240  
tggcgaggga cctgggaaag ctccgggcca tggggctcgt cgcgggggac gcagccaagg 300  
agaaggtcct ctcggaagcc acggatcttc tgctgcanga gctgagccag atgaaggatg 360  
cggaatacaa gataaacaag atggagaaag aacagaatgc tgctatgaaa gcactgaaga 420

<210> 3267

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G12

<400> 3267

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ccgtcacgcc tgcgccgtgc cgtcgggggg ctccacccca cgacgcccct ccgtggccac 180  
gccgcgccac ccacctcct cgctgtcccc cgcggcgctc tccgaggag ggtactaccc 240  
gcctctgcgg tgcagcatcg accaccgcc caccgcgtcc gaagcagacg cgctcgagac 300  
accgcgcgac cagctcaacc acctcgccca ccgcgtccac ctctcgagc gcggcgcgac 360  
cccgatggcc gccaccaaca ccacgcccat catccgtgtc gcgccggggg ctgccttccc 420  
gcaccatgca cgtgccta 438

<210> 3268

<211> 227

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G3

<400> 3268

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaacaaaaa gatcaaaaaa aaaaataaaa 120  
aaaaaaaaaa aaaaaaaaga aaagggaggc cgcccaaaag gttcaaagct tagttacccg 180

tgaatgcaac ttcaaaactc ttcaaaagtg tcacctaaat taaatta 227

<210> 3269

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G5

<400> 3269

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gaaccgcgcg cccggcacgc tgcgctgggg cgctcatccag cccggcccgc tgtggatcat 180

cttcgcgcgg tccatgatca tccagctctc gcaggagctg ctcatgagca gcgacaagac 240

catcgacggg cgcggcgcgc aggtgcacat cgccaacggc gccgggatca cgggtgcagct 300

ggcgcaaaac gtcatcatcc acaacctgca cgtgcacgac gtcaagcaca ccatgggcgg 360

cctcatgcgc gactccccca cgcacatcgg ctccccg 397

<210> 3270

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G6

<400> 3270

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cgcccgtgac agcgctgcac gccacggacg cccgcgggga ggtgcggctg gtgtggtgcc 120

agagccccgc gccgcgggtc cacggcgcca gcgtggaggc cgcggtgcgc ggcgcgcggg 180

agctccgcct gctccggcac gccgagacgt acgttatcgg gtgccccggc ctgctgatcc 240

gcctcttccc gtcgcccgcc tgcgaattgt ccggggacgt tcgcctcctc tgcgccgaat 300

ccgggctcca aggccaactc aactactggc ggaccggcg gttcttcctc cgcttccggc 360

gctgcgacgc ccgctgcgtc aggggcagga tcttccgct 399

<210> 3271

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G7

<400> 3271

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gccgcggtga gccaagccgg cgcacgtcgc cccggggctc acgctcacca ccgagccgca 120

accaattaat aatatatata tatagctagg atcgatcgtc agtaaaatgg caggctccgc 180

cgctctgagg agccccctgt ccgtcctcct ctacatcctc gccgccgtgc ccgccaccgc 240

cgcgggcgacg ccgaccgacg ccgccatcga cgaggcgtac gcgcatctcg tcaacctcat 300

cgctaaccag gagtactggg cggagcgcgc ggatgcggcg caccgcgtaca accgcgcggc 360

gttacagacc gacccgtggc cgctcgtgc 388

<210> 3272

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G8

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ccaaggcgac gtcttccggg gacgagaaca actacgtgag cgtggccgcc gcctacgaga 360

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-H1

<400> 3273

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cgcgttggtc gtcgacggcc tgcaggtggg gttctatggc aagacgtgcc cggcgggccga 180  
aggcgatcatc agcgacatcg tcaacaacga aatcgctatg gaccggggca tctccctgg 240  
cctcatcgcc ctcttctttc acgactgctt catcacgggt tgcgacgctt ccattctcct 300  
ggacgagtcg cccgccggcg acgtcccaga gaaggagtcg tccgccaacg gcttcaccct 360  
ggtcgggctc agaaccatcg ac 382

<210> 3274  
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<212> DNA  
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<223> Clone ID: LIB148-043-Q1-E1-H10  
<400> 3274

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atcaagtttt catgtctgat ctgcacattc agatcccaac tgccgtcgat cccttcgctg 180  
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tcca 244

<210> 3275  
<211> 357  
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<213> Zea mays  
<223> Clone ID: LIB148-043-Q1-E1-H3  
<400> 3275

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ggctggggct tcgggcggca gccggtgctg accccggtcc tgtactcgcc gcggaaggcg 180  
caaggcccg cgttcggggc gctggcgctg tcgaccatcg cgcgcagtga ccaactccacc 240  
agcgccgtgc tgcccgcgc cacggtgctg gtggccggcg gcaacacgaa cgcggcgctac 300

aacttcagcg gcgtggactt cccacccgag gtgcgcgtgg agcggttctc cccgccg 357

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<211> 295

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-H5

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tgtggatgtg ttgttgcttt gaattgcgct gtcgtgttta cctactcoga gtccgacaac 180

agcctcgacg ccgagtgcct tttcgtttca acgatgtgct atatcttggg gccacggaac 240

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<210> 3277

<211> 348

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-H6

<400> 3277

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cgatgcacgg aggaggatgc cgccgtagct gcggagattg ataataataa gcgggcgagg 120

accgccggcc cctctggcct cgctgtcctt ccccccttc tccccccaca tgcgctgccc 180

ccgccgggcc ctgccctgcc ctgctgcgcc caaccagctg aatctccgca cagacaatta 240

gagtagctgc attggcgggg aaagcgcaag aagctcagca gaaatggcgg agcaggcagg 300

cgccggaagg tactggtgcc acatgtgcgc cgcggtcgtg agccccgc 348

<210> 3278

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-H7

<400> 3278



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 gttcttgtag cggttgacct acctcaatgt cgcatctac cccttcacct ccatcttctt 180  
 gctggtctac tgettcaccc cggcgctgtc cctcttctcg ggcttcttca tctgtagac 240  
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 cgtgctcagag gtcaagtggc ccggcatcga gctcgaggac tggtagcgca acgagcagtt 360  
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<210> 3279  
 <211> 352  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
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 gcggcggggc gcgagcagaa gtggggccac gtggaggggtg atgaagacgg tggagaggac 300  
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 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-043-Q1-E1-H9  
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 gtagacaaca tggcaatcga tgaggtcagt ggtgatgctg cagagggcgc ggaagagctt 180  
 gaccctgcgc tcgaggagac gccgatggag gagacgatcc gtgtgacgcg cgccaagcta 240

aggagggcgca ccgccaccga ggattctgct gggaattagc tgcattgccgt tgttttccct 300  
gcacattgta ttgatctttt tccgagtttt aggtcacat gttgtttgct ggaatggaga 360  
tatgttggtt ttcacttggg tcttgtagaca cagagttaat taa 403

<210> 3281  
<211> 385  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-044-Q1-E1-A10  
  
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cgctggcgag gtacgatgga ccgtgcatgg cgaccaaccc catcgaccgg tgctggcgct 120  
gccgcgccga ctgggcgact gaccggaacc ggctggcgca gtgcgcgcgc gggttcggtc 180  
acaggaccgt ctgcggcgcg gccggcaagc tgtacgtcgt gagggaccgc agcgacgacg 240  
agatgatcat cccgcggaag ggcaactctgc ggcacgccgt gatccatgac tggccgctgt 300  
ggatcgtgta cgcgcgctat atggtgatcg agctgcggca tgagctgatt ctgaatcaca 360  
acacgacgat cgacgggccc ggccgc 385

<210> 3282  
<211> 408  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-044-Q1-E1-A11  
  
<400> 3282

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gttcaagaaa aataccagct taccaacaac agcagcagca agcccacccg ttcgacgaca 120  
tggtccgcct cgcgcgccgc gccgtgttg cgctcctagt ggcggtcgcg gcggtggccg 180  
cgttcctcgc ggtgccggcc tcggcgaaagt ccggggagct gagcgcgatg gggttgctgg 240  
cggcgaaagg cgcgagcggc gcgggcccgc agaagtgtc gggcgcggtg ggcgagtgcg 300  
acgtggacga ggcggaggag ctggggctga gcggcgccgc cctcggtcc gacgacgcgg 360  
tgcgggcgac gctggcgag cggaagccga ccaaccggt catcagct 408

<210> 3283  
 <211> 413  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A12

<400> 3283

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ctcgcggggtc gacccacgcg tccgcattcg ttctcctcat cttacattac aggtcatagc 60
taagcagggtc tgacaggatg tcgtggcaga catacgtcga tgagcacctc atgtgcgaga 120
tcgaggggcca ccacctgacc tccgctgcca tagtcggcca cgacggcgcc gtttggggccc 180
agagcaccgc attcccacag ttcaagacag aggagatgac caacatcatg aaggacttcg 240
acgagcccgg gttcctggcc ccgaccggcc tcttcctcgg cccaccaaag tacatgggtca 300
tccaaggcga gcccggcgct gtcateccgc ggaagaaggg atctggaggc ataactgtga 360
agaagacagg gcaagcgatg gtggtcggca tctacgacga gcccatgacc ccc 413
```

<210> 3284  
 <211> 436  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-044-Q1-E1-A2

<400> 3284

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cgtccttagc tccccgcgg tgctggggat tgaacatgtg ccgctgcgag cgaatcagtt 120
ggccgctgtc aggaatcttc aaccgcttca acgatttggg ggtgctcggg ggtcgggaag 180
cttctctggc tcacctctca catgtgtgtg gccttattgg acaaagatag ccttcggagc 240
tcgaccaatt gctcatcggg gcaatggctc caccgcgggc gggaccactg ctgcagaccc 300
atttcactcc cttgccatca ccgcgtgagg tcacgagtca cctgaagatc atcctgggtac 360
ctggaatctc aagtcncagg tcaagaacag gtaccacagg atgaggcgca tggaggatgc 420
tgcgatatgt tcgtga 436
```

<210> 3285

<211> 443  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A4

<400> 3285

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ggtcgacgca cgcgtccaag cagcatcaag gggtgccctt ggcgttcgtg catatagcca 60
tggtcttggt gttgggtgdcg ctatactcga acgccaatgg cagcaccaag gggtgcctca 120
aggagcttgc atgcttctag accctccgtc gactgaccca tctctctagt tataatTTTT 180
ctctcgctct tgcattgccc attacatgct atccattggg aacgcacaac agtaaaacga 240
cagacatccg acagctatac tatgttcgac ggtgtaacac cctgaatttg agggataaaa 300
atttcttctc taaataccat ccacattcac gtgttacctc ttgtctctct ctctctctct 360
tttccttttg attaacagta agtgaattat gcgacgggtt aattatttat tttgtcaaaa 420
cttatgtgac tcatgatacg ttg 443
  
```

<210> 3286  
 <211> 436  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A5

<400> 3286

```

accacgcgt ccaactatggc atgacgctca tgctcatggg cctctgttcc gtcgcgtcgg 60
ggctctcggt cggccacacc cggcggtccg tcatggcgac gctgtgcttc ttccgcttct 120
ggctcgggtt cggcatcggc ggcgactacc cgctgtcggc gaccatcatg tccgagtacg 180
ccaacaagaa gacgcggggc gcgttcatcg ccgcggtggt cgcgatgcag ggcttcggca 240
tcatggccgg cggcctcgtg gccatcgtcg tgtccgcgtc gttcaaggcc aggttcccag 300
ccccggccta cgcgctcgac cccgccgggt caacgccgcc gcaggccgac ttcgtgtggc 360
ggatcatcct gatgctgggc gcaatgcccc cggcgctcac ctactactgg cgcaccaaga 420
tgcccgagac ggcgcg 436
  
```

<210> 3287  
 <211> 418  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A6

<400> 3287

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ccttggtgttc ctgcgcgtgg cctcaccggc ggctctggcc gccttcgatg tgatagagat 120

gctgggagac aagcccacgt actccacgtt cctgaagctc ctgcaggaca ccaaggtcgc 180

gggcgaggcg aatcagctcc ggtcggcgac gctactggtc gtcccgaca aacttgccaa 240

gcctctggcg tcgctgctcg ccgataacgt gcggccggcg gtggagaacc acgtccttct 300

cagttacttc gaccccatca agctggacga gatgaagaca cgcaccgcca tcctctccac 360

gctgctctcc gtcaccgaca agaaactcgg cgtcctcaac tacaccaggg ccgacgac 418

<210> 3288

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A7

<400> 3288

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gggttagggc ggaggtgtac ccgctgttcg cgacgacagg ggtggcggtg gggatctgcg 120

tgatgcagct ggtgcgcaac atcaccacca acccgaggt gcgggtgacc aaggagaagc 180

gggcgcgcgg ggttctggac aaccacgacg aagggccgcg ctactcccaa caacgggttc 240

cccaggtccg ggtcctcaaa ccgcggaac tacttccagg caatggccaa ggtgccaaacg 300

gccctatta ttagacgac gacgatatac ccaatgcat ggcaagaata tatatatatc 360

agcacaacgc aactgcatgc gatgctgctt gttgctgcaa ttaatccact atactatata 420

ctatgggagt attattg 437

<210> 3289

<211> 225

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A8

<400> 3289

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tcttcggtag ctgccagtca accttcact ggacctacat tatcgcaagg cctgatcggg 120

cgactgcgat acgccgctcc atcaccgctc aagtacctca ggatgaggaa agcagcggat 180

tcgtcttctc tcaagggcat cgtgtacggc agtccgggat gtgta 225

<210> 3290

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A9

<400> 3290

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cgcatggtgg ccttcacgta cctgcgcatg gggcccgacc tgttcagacc cgacaactgg 120

cgccgcttcg ccgcgttcgt caagcgcgat acggagccgg gcgcgcggga ggcggtgccg 180

gagcaggtgg agcgggaggc cgagggcgtc gcgcacgcca cccagcccct cgtgcacgag 240

gccgccgtcg cgctcaccaa ctgaccggac cggccggcgt tccccgtcga ctgtgttcga 300

tcgctagacg ggggtggcacg ctgcgacgac tacctgtatg gcgagtcctt atacttactc 360

atacataagc tgcgcgcgcg tgtcgtcggg gcgtgcaccg cg 402

<210> 3291

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-B10

<400> 3291

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agcatccttt cgaagaagta acacttctcc gtgaggcctg agcccctcgc cgcggtgagc 120

caagccggcg cacgtcgccc cggggctcac gtcaccacc gagccccaac caattaataa 180

tatatatata tagctaggat cgatcgtcag taaaatggca ggctccgccg tcctgaggag 240

ccccctgtcc gtccctctct acatcctcgc cgccgtgccc gccaccgccg cggcgacgcc 300

gaccgacgcc gccatcgacg aggcgtacgc gcatctcgtc aacctcaccg ctaaccagga 360  
gtactgggcg gagcgcgcg aggcggcgca cgcgtacaac cgcg 404

<210> 3292  
<211> 361  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-044-Q1-E1-B11  
  
<400> 3292

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gtccagctg cggacgtccg atgccgcggg gcagcccgcc tcgcattcgc cggcaatggt 120  
ggtgtcgtct ggcggctcca atcccaagtg cgtggccggc gccagtaacg accacgcgtg 180  
ccgcgtcggg ccagtgcacg atccagtga ccatgaggag gagggctcta gctcaatat 240  
ctacgcgccc accgccgcgc ccgactacgt ctgacacgac gacggcagcg actacaaaga 300  
tgccgacgtg cccaacaacg atcatctcgt catcgtcagt cattgaaagc tgtcgcgcg 360  
g 361

<210> 3293  
<211> 405  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-044-Q1-E1-B12  
  
<400> 3293

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gcaaaaaacca ccatccgtcg tcgccaaccg tagcaaggag ccaaggacat caccaccgcc 120  
cagcaataat ggcgcagagc atgaggattg tggcgctggc cttggtggcc ctgctggtgg 180  
tggcgggcggc ggcgcccgtg gccaccgcgt acggtgcta cgacgactgc tacgagcgt 240  
gcgccaacgg caagaaagac cccgcctgca ccaagatgtg caaccaggcg tgcggctcca 300  
cggaccaggg cgccggtgcc gccggcgccg cgccggcttg atcgcccagc gcattcatcg 360  
cttcagctcg atataatcg tgctccgtca gcaaccaca tatga 405

<210> 3294

<211> 415  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-044-Q1-E1-B3  
  
 <400> 3294  
  
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 ggtgtcatgc gccacgctgt catggctcta acaggacgag ctcaactacc cgtccatcag 120  
 ggtcatcctc agataaccgc ccttcaccgc gacggcgaag cgcgccgtca caatcgtcgg 180  
 cacggccagc tcgacgtaca ccgtcgccgt gaacgtgccg gcgtcagtca cagtggaggt 240  
 gatcccgccg aaactgactt tcaaggcgt ggaagaagtc ctgaaatact cagtcacaag 300  
 caagtcggcc aatggccaga cgcttatcgg ccctgtcgag ggggagctca aatggttgtc 360  
 cggcaagtaa ttctgcgga acacgacccg cgtcagtaac gaatccagga cctcg 415

<210> 3295  
 <211> 397  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-044-Q1-E1-B5  
  
 <400> 3295  
  
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 cgacctcaag gcgtccaaca tcctccttga cagggacttc aacgccaaagc tctccgactt 120  
 cgggctcgcc aagctggggc ccatgggcga ccagagccac gtcagcacca ggggtcatggg 180  
 cacgtacggc tactgcgccc ccgagtacgc catgaccggc aagctcacca agatgtcggg 240  
 catctacagc ttcagcgtcg tgctgctcga gtcatacacc ggccgcccgg ccatcgacgt 300  
 cacgatgccg tccgaggagc aggtcctcgt tcagtgggca acgcctctgc tgagagacac 360  
 gcggatgttc atgaagctgg ccgaaccgtt gctgggc 397

<210> 3296  
 <211> 433  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-044-Q1-E1-B6



<400> 3296

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ccatccgtcg tcgccaaccg tagcaaggag ccaaggacat caccaccgcc cagcaataat 120

ggcgagagc atgacgattg tggcgctggc cttggtggcc ctgctggtgg tggcggcggc 180

ggcgcccgtg gccaccgctg acggctgcta cgacgactgc tacgagcgtg gcgccaacgg 240

caagaaagac cccgcctgca ccaagatgtg caaccaggcg tgcggctcca cggaccaggg 300

cgccggtgcc gccggcgccg cgccggcttg atcgcccagc gcattcatcg cttcagctcg 360

atataatcgc tgctccgtca gcaaccaca tatgattcga tcaatcttcc tcctctaatt 420

tctcgactcc gtc 433

<210> 3297

<211> 433

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-044-Q1-E1-B7

<400> 3297

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tctgtccgcc gctcggagc tggccaccct gaagcgcccg ttccggcaacg acgggttcgg 120

cgatggcagc aacaacggca gcgcgaccgg cgagaagccc aaggcgcggc ggcgggagggc 180

ggacccggcg gcggcgatgg ccgcggcgcg gcacgagttc ggcgagcacg gcggcggtgaa 240

catgtccatc gaggcgtcgg cgacgttcac ggtgatggag ccggacacga tgcggcggtc 300

gttcgcgggc gagctgggcc ccgaccgagg agacatgtac atctacagcc ggcacttcaa 360

cccgcgggtg ctggcgctgg ggcggcagat ggcggcgctg gagggcacgg aggcnggcta 420

ctgcacggcg tcc 433

<210> 3298

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-B8

<400> 3298

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tctctggctt caatatttca tatgttgact gtggttggac gatcgtctcc atcactctag 120  
ccacatttgg gtggcatgga ctctcatcgt gaagaatcat caagtccatt tgacatagga 180  
tttgcacccg acgttgacgc caatgacatg ttcattgggtc tgacatcact gcagcataca 240  
ttactacatc atcacattct caacatttat tctgggagct taacacagac atggatttct 300  
cacaattcca gaactgtcat atattccttc tgagcatcaa agctgtttat cctacgtcgc 360  
acgacaggac tctcagatgt tgcgttcaat acatcaacga gcttttacag ctacgaatcc 420  
a 421

<210> 3299  
<211> 401  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-044-Q1-E1-C1  
<400> 3299

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cctgcgggtg aaggccaaga agaacgtggt ggagatgccg ggcaatggcg acgtgcccta 120  
cacgcacgca aacatcagcc tggcccggga gcagctcggc tacaagccca cgacgagcct 180  
ggagatgggg ttgaagaagt tcgtcagggt gtacctctcc tactacggat acaaccgtgg 240  
gacgcatacc ttccggaact catgatgtcg ctctgcctt ccactctcgt ctgggtccac 300  
acaagtgtg ggggaaattg tgttgactgg ctgttgtagt tgggttagga cagaagagga 360  
ggggacggcg acagaacgat caaacggagg gccggctttt t 401

<210> 3300  
<211> 381  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-036-Q1-E1-H7  
<400> 3300

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caaacatcaa tgaattgttc acgcccacta gaaaaaagg tttgcgtgtg atggaagcga 120

tctggtgctt gcgtatgcca gcaagctgcg attctgagtg taacacataa cgatgttctt 180  
tcattcttct tttttgttcc cttgttgcac caaattgtgc ctaaaccacg tcgatgtgct 240  
gccatattgt caatccctga aacggtcaat catggatgga ccgaatgcaa tacaaatata 300  
ttatactaca caataacgct acctttgcta aaatactgga ctcactccta acaaataaat 360  
ggcggccgct ctataggatc c 381

<210> 3301

<211> 451

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-H8

<400> 3301

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tgtgtctgtc tggcaatcga tcgatctcca tgacgacgtc cccgccgcgc gcacgcctgc 120  
tcgccatggc gctggcgctg gcattcgctt gcgtgctgct cgtcaggtec gcggacgccg 180  
ccacgcccgg cggtcccgcg tacgggtgca acccggccac ggacaggacg tgcaggccccg 240  
agggcgtcgg ggtgggtgctg cccgacggcg gcattgacct cgacggcgac ggcgacgagg 300  
acgagctgcc gcagttcgac ccacacttca cgatcctcgg ccatgcccag tgagtgtgag 360  
tgcagggtgca gctggctggt tggatcatct agtcgggtgta ctggacatgc gtcgtaatct 420  
ctgtcgttca ttcgacgcga gaggaattga g 451

<210> 3302

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-A1

<400> 3302

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cgcttaataa cattgtagat tggtagcgga ggtcgaggaa atggaataag acggctattc 120  
caatccta atcgggacaaag tttgatgact ttgctcagct tcctcttgag atgcaatggg 180  
ccatcgtaa ccaggccaga gcatacgcaa gagcgatgaa ggcgaccctc ttcttctcga 240

gcgcgacgca caacatcaac gtgaacaaga tcttcaagtt catcacggcc aagctcttca 300  
acctcccgtg gacggtggag cgcaacctca ccatcggcga gccatcata gacttctgac 360  
gacgcccctcc tctaactagt aactcggcag cacacgcacg ac 402

<210> 3303  
<211> 424  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-037-Q1-E1-A10  
<400> 3303

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ccccctgagg ccggggcccaa ccgtttcccc cggcgcccc cccgccgccg gtggcggtgc 120  
cggagggggc ccgtcgggtgc cggccgggtcc gctggacatc gcgcagctgg gcgccaaagg 180  
cgacggcaag tcggacagca ccccgatgat cctcaaggcg tggagaacg cgtgcgaggc 240  
gacgggggta cagaagatcg tcatcccgcc gggcaactac ctgacgggcg ggctggagct 300  
gaagggcccc tgcaagtcct ccatcatcat ccgtctcgac ggcaacctgc tcggcacccg 360  
cgacctcagc gcgtaccaa ggaactggat cgagatcgag aacgtcgaga acctgtcaat 420  
caac 424

<210> 3304  
<211> 435  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-037-Q1-E1-A12  
<400> 3304

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gcgtggggcg acgcgtgggt gcgtgcctag catgcatgca tgtgacgacc tctcctcctc 120  
gctgtctctc tgtatctgca actgcaagca aggaaattaa ttaaaagaag atcggcgcca 180  
tggcggcaac gacgacgggg atgcagatga tgcaggtgca gcaggcggcg gcgttgetgc 240  
tgtgcttggt tgtgttggcg gcgtctacgc gggtcgcgct gggcaactgc cgcgacgact 300

gcatggctgc atgcaacggc tggaccatcg tctgccagct ctctgtgcc agcgcattgt 360  
acggagaagt cgggatcaca accttaggta cgtcggctgt attagcga aa gcagaagcgc 420  
ctgcatcnag cacac 435

<210> 3305  
<211> 288  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-A2

<400> 3305

gggtcgacgc acgcgtccgc ccacgcgtcc gcaattttct acctaggca gaagaatcca 60  
catgcataat aaaaggtgaa agctagcata agaggtagct aactctaccc tactatagag 120  
aaaaagtcag cacattgcaa gaaataataa tggagacgac gacgaagctc cgggtggagcc 180  
ggcccggctc ctctctctc gtcgcgcggc cgttctctggc gtccgcccgc gcgtcgggag 240  
tcaacgtcgg ccagttcgac gaccacttgc agaagcggaa ggagctcg 288

<210> 3306  
<211> 388  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-A4

<400> 3306

gggtcgacgc acgcgtccgc ttcaagctc cctcacaaa taagggtccc cctttttccg 60  
acattcacag gggggacagg aaatcagcgg ccatggctc gattccggcg acgaccttcg 120  
ccgtcatctt atccgtctc ttctgtgcc cgggtggcac cgccgtcgac aacgacctcc 180  
ccgactacgt catccagggc cgcgtctatt gcgacacctg ccgcgccggg ttcgtgacca 240  
atgtcaccga gtacatcgcg ggcgccaaagg tgaggctgga gtgcaagcac ttcggcacccg 300  
gcaagctcga gcgtccatc gacgggggtga ccgacgggaa cggcacgtac acgacgagc 360  
tcaaggacag ccacgaggag gacatctg 388

<210> 3307  
<211> 429  
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-A5

<400> 3307

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accatccaca ttgaggttgc ggcaaaacat gcagtagttg agaaggtgga ggaggacaag 180

gaggaggcac taacagtggc ggcgaaacaa gagccagcag ccaccattga gcctcagcag 240

attgctagtg aggtgaccac ttcggaagtg gcggtcgctg ttgtcgagcc tgagaacaaa 300

gaggaggagg aagttgtgga gaagaccgtc atcgagaagg agaagccatc agcagtccat 360

gcagaggaaa atattgccac caacaagggtg gcagccgagc ccacgacaga attgaagaaa 420

gacacgaag 429

<210> 3308

<211> 427

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-A7

<400> 3308

ccacgcgtcc gaagaaggtc acgtacgtgg tggaccccag cggcaagggc gactacacca 60

acatcaccgc ggcgctggag gatatcccgg tgagcaacac caagcgctg atcctggatc 120

tcaagcccgg cgctcagttc cgcgagaagc tgttctgaa catcagcaag ccgttcatca 180

cgttcgggtc ggaccccaag aagcccgcgc tcgtggtctg gaacgacact ggggccacga 240

acggcaagga cggcaagccg gtgggcacgg tggggagcgc cacgctggcg gtggagtcgg 300

actacttcac ggcgtacggc gtggtgttcc ggaacgacgc gccgctggcc aagcccggcg 360

ccaagggcgg ccaggcgggtg gcggtgcggc tgttncggga caagacgcag atctacaact 420

ggcacaat 427

<210> 3309

<211> 423

<212> DNA

<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-037-Q1-E1-A8

<400> 3309

ccacgcgtcc gcttcaccga gcccagatc aagtgtaca tgcgacagct gctggagggg 60  
ctggcgact gccatgcgcg cggggtgatg caccgggaca tcaagtgcgc caacctgctg 120  
gtgaacaaca gcggcgagct caaggtggcg gacttcgggc tggcgaacct ctgcgcgcg 180  
gcgcggcgcg cgccgtcac cagccgggtg gtcacgtctt ggtaccgccg gccggagctg 240  
ctcctgggcg ccacggcgta cgagccctcc gtcgacctt ggagcgccg ctgcgtcttc 300  
gcggagatgc acgcgcgcg gcccgctctg cagggccgca ccgaggtcga gcagattcac 360  
aggatcttca ngctctgtgg ctgcgcgcgc gaagacttct ggcgccgctt ggggctctcc 420  
cac 423

<210> 3310  
<211> 372  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-A9

<400> 3310

ccgggtcgac ccacgcgtcc gcccacgcgt ccgggagtc gccatcgaag agatcgctcc 60  
tgaggcgcg gaacggggag gaggatgcga gactgtcttc ttgcaggctg tctcggagat 120  
catggaccgc cgtctcgacg acatatcaaa ggacatgtta gcctctagat atgcacatgg 180  
ctgacaaaat aacgatgtaa tcaactcaat ggctaataca aagaatggtg tactatttca 240  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaadagaa agaaaaacaa 300  
aaagataaaa aaaaaaaata aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aagggggggc 360  
cccctaaag gt 372

<210> 3311  
<211> 418  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B1

<400> 3311

caacgcgtccg caccgtagag ggcattgtgcc ccggcaaggt ctctgtgcga gacatcctgg 60

ccttcgcggc gcgcgacgcc gccgtggccg cgggcctccc gagatacgag gtcgcggcgg 120

ggcgccgcga cggcatgcgc tcgaacatgg acgacctccc gggcaacttc cccgtgccgg 180

gccaccacgt gccgcgcctc accgagctct tcagccagcg ggggtctctc caggaggacc 240

tcgtctctgt ctccggcgcg cactccatcg gcggcgcgca ctgcttcatg ttctccaacc 300

gcattctaaa cttctcccag gacgccgacg tcgacctgac gctggaccgg gagtacgcca 360

agtggctgcg ccagatgtgc ccgcccgggc agccccggcg cgaccccgag caagcgcc 418

<210> 3312

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B10

<400> 3312

gtaccggctg agattccggg tcgaccacgc gtccgggaca aaactcctat ctgaacggta 60

atcaactcaa caatgactgg aatgatgttc ccaacaacaa aggacttcaa ttaagtgttc 120

ctgtaaata attgggcata tgggcaaatt cctggtaaaa tgacaattaa gttccccaat 180

ggaaggcaat caactgcca attacaccta acaaaatcct tagaatcatc aaagaatatg 240

cttttggtgc atctccctat cctgttatta atactctaga agaacacctt acacctgatc 300

ttcaagagag agtagctaag atggctcttt aagtgtctgg agacatcctg tattaccctg 360

aatccaaaca ttttcaagaa tttccttcac ctgaagctct aaagggggcg gtcattgtgt 420

caacaaaacc ccca 434

<210> 3313

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B2

<400> 3313

ggtcaagaat tcacgggtcg acccacgcgt ccaacatgac cacctaaaaa ctcttggtgg 60



agggtgactac ctttttgcgt tccgtatggt catggtgctt tttaggcgtg aagtatcatt 120  
 tgggagactcc ttatacctct gggagatgat gtgggctctg gaatacgaac ctgacatttt 180  
 cttcgcagcg tgtgaatgaa caaggtgcag tatataaaca caaagtttct aatcaaaac 240  
 tgaaaggact gcgccatttt ggcaagtggg ataataagga taaagacaag gataaggaag 300  
 atgctaaaaa tggggctgag gatggtgaag acggtcctgt tccaatttct gttttcatgg 360  
 ttgcaagtgt ccttaatgaa aagatagaaa agctgt 396

<210> 3314

<211> 444

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-B4

<400> 3314

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 acaatgcgat gagagccttg ttctctctgg tctcttctg catcgtgcat ggtgagaagg 120  
 aagagtcaaa gggcatcgat gcgaaagcgt ccgggcctgg tgggtccttc gacatcacca 180  
 agttgggcgc ctccggcaat ggcaagacag acagcacgaa ggctgtgcan gangcatggg 240  
 catcggcgtg cggcggcact gggaagcaga caatcctcat acccaagggc gacttccttg 300  
 tcggacaact caacttcaca ggcccttgca agggcgacgt gaccatccag gtggatggca 360  
 atctgctggc gaccacggac ctaagccagt acaagggaca tggttaattgg atcgagaatc 420  
 tacgcgtgga taacctggtc atca 444

<210> 3315

<211> 429

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-B5

<400> 3315

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 agatggagaa ggccaagtgc cgcgcggcca tggaggccgc cgaggcggcg cagaggctgg 120

ctgacctgga ggcgcagcgg cgccgcaacg ccgaggtgcg cgcgcgccgg gaggccgacg 180  
 agaaggtgcg cgctctggat gccatttcca accacgactt ccggtaccgc aagtaccaca 240  
 tcgacgagat cgagatggcc acggagcgct tctccgacga gctcaaaatc ggcgagggcg 300  
 gctacggccc cgtctaccgc gcctccctcg accacacccc cgtcgccatc aaggtgctcc 360  
 ggcccgcgcg gcaccagggg aggaagcagt tcttganga ggtggaggtg ctcagctgca 420  
 atccgcacc 429

<210> 3316  
 <211> 419  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B6

<400> 3316

ccacgcgtcc ggggcgagtg cgtgcgttcg tgcagccaca gacaggcgtc cgggcaccat 60  
 gtctttcacc ggcacgcagg acaagtgcac ggcgtgcgac aagaccgtcc acttcacga 120  
 cctctcacg gccgacggcg ccatctacca taagacatgc ttcaagtgca gccactgcaa 180  
 aggggtcctc tcgatgtgca gctactcctc catggacggg gtgctgtact gcaagacca 240  
 cttcgagcag ctcttcaagg agaccgggag cttctccaag aacttcacgc caggtggcaa 300  
 gtcacagac aaggggtgaac tgacaagggc cccaagcaag ctgtcgtctg cattttctgg 360  
 taccaggat aagtgcgcag catgccagaa aacagtgtac cccgctggag aagttaact 419

<210> 3317  
 <211> 427  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B7

<400> 3317

ccacgcgtcc gccttcattc aacgacatca tcttccacc tatcatggcc aacaaatcg 60  
 catctccgcc tctctctcta ttccaaggat attaagctct atggagagat ggtcgaccaa 120  
 gaatgaattg aacaacaata tataaggctc catgcgcaac caaacagcta catgtacatt 180  
 gcaggcgtgt gtgaaattgt ttatttattt ttgcatgtg cagcgtgag tatttgcttc 240

tccgtacata ctctatgtat gaacgtgtgc atgtgtgaac taactacatg agacgacaag 300  
 gtgcaagaga catgtctggg gcgtcatttg tatggcttta atttttttta ttatatatag 360  
 ataaggaaat attttcctta aaaatggagt acaagggatt gttgagaact gcttttggtc 420  
 atgatat 427

<210> 3318

<211> 293

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-C1

<400> 3318

cacgcgtccg gcttcagccg cagcttctac gaggactgcc gcacgcagtc ggtgggtcaag 60  
 gaggtggcgg tgctgacggc gcagcagcgt tccaagtcca tcgagggcgc catcgacacc 120  
 ggcttctcgt tcaagaactg cagcatcggc ggcgtcaagg gcggccagat ctacctgngc 180  
 cgcgcctggg gggactcctc ccgggtcgtc tactcgtaca cgaagatggg ggaagaggtg 240  
 gtccccgtgg gctgggacgg ctggcagatc gccaaagcggg agagcagcgg cat 293

<210> 3319

<211> 296

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-C4

<400> 3319

ccacgcgtcc gggcggggat gtgcggcatg ccgccctgct cgttggttctc agatgcagca 60  
 tgcgtgcact acgtgcggtt ggctggcatt tgcacgctg cgcacttgcc tctgggaact 120  
 tgcattaccg gggcgtacat tgaggcgtg ggcattcttc ggatgcgtgc ctatcggtac 180  
 aaactctgat gttcactccg gacgattcgt tcgacgcagt tgagttcctg cgtcgcgact 240  
 ctcgctctct acgctaata ca cgtggctgac atgggaagac acatcgacgc ctccac 296

<210> 3320

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-C5

<400> 3320

ccacgcgtcc gcgcagctga gagagagaac agaaggagag agagaggggcc tcgccggcga 60  
ccttcgctcc ggcttgatg tgggtgcccc gttcctcgct gggcagtgcc gagcgtaac 120  
cgagaaggtc gcgctctcgc cgggtcaagtc tggaggacga gctgctcaga atgcgtcgtc 180  
agcattgaga gaagtcattg gctcctacac aaatgcaatc cgccgtcgtc tacgtctcga 240  
ccaacgcgtg aggttacgag ccacctgaag aacaagttgg tagctggaat ctcaagtccc 300  
aggtcaagaa caggtaccgc aggatgaggc gcttgaggga tgctgcgatg tgttcgtgag 360  
aggtctaggt cgtcgtctcc cagtcaactt tgggttgctg gaccgttgtc tccatataat 420  
gtaataattt a 431

<210> 3321

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-C6

<400> 3321

ccacgcgtcc ggccggcgcca cggcctctcc tgctatcgct gctggctgcc gtgctagcgg 60  
tggccgcgga tgtcgccaac gccggccacg ccaagccctt gacgcctggc gggcgcggtg 120  
tacaccacaa ccacggcaag ttcacggccg ggccgtggaa acccgcccac gcgaccttct 180  
acggcggggc ggacgggtcc ggcaccacgg cgggcgcgtg cgggtacaag gacacgcgcg 240  
cgcaggggta tggcgtgcag acggtggccg tgagcacggt gctgttcggc gacggcgcg 300  
cctgcggcgg gtgctacgag gtgcgtcgcg tggacagccc cagcgggtgc aagcccagcg 360  
cggcggcgct ggtggtgacg gcgaccgacc tgtgcccggc caacgaacag cagtccgcgg 420  
acagc 425

<210> 3322

<211> 460

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-C7

<400> 3322

ggcacaggtc aggaactcgc gggtcgaccc acgcgtccgg tgggatcgag ttgtttcact 60  
gcacgagcac atcctccggc gaccaccggc ctccctctcc gtcctctagc gaccgaccaa 120  
cgcgtcgagc gaagatgtcg tggcagacgt acgtggacga gcacctgatg tgcgagatcg 180  
agggccacca cctcacgtcg ggggccatcg tcggccacga cggcgccacc tgggctcaga 240  
gcaccgcatt ccccgagttc aagcccgagg agatggctgc catcatgaag gatttcgacg 300  
agccggggca cctcgccccg accggcctga tactgggagg caccaagtac atgggtcatcc 360  
aaggcgaacc tggagctgtc atccgtggca agaacggatc cgggggcatc actgtgaaga 420  
aaacagggca gtcactcatc attggcatct acgacgagcc 460

<210> 3323

<211> 348

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-C8

<400> 3323

ccacgcgtca gtggagatgc agatgcaaac tgttgatatgt ggtgggtgctt atattgctat 60  
cctgttgctt gattgtacgt gttgtcgtcg tggcaaattg tcagtgggtg taaaatatga 120  
ggtcgtaccg tgacctcaaa ctaagggaaa aaggcaattg tatgaccca gatgggttaa 180  
taaaaaataat tggacagttt ccggcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240  
aaaaaaagag agcaaaaaaa aacaaaaaaa aaaacaaagg gacacaagaa aagaacgaac 300  
aaaaaacaag caggcaacac gtacaaacaa aaaaaggggg ggcccccc 348

<210> 3324

<211> 134

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-C9

<400> 3324

ggtcgaccga cgcgtccgaa cacgcatctg cggacgcgtg ggcggacgcg tgggaatcat 60  
gcgaactgca gtaaaggaat cggacaacgc gcggagaaaa aggggcggcc gctctagacg 120

atccaacctg gagc

134

<210> 3325

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-D10

<400> 3325

cgggtcgacg cacgcgtccg gcgcgcgtcg cgtccctgcc gcggagcgcc agcgagctac 60  
ccgacccgcc gtcaccgttc agtccaaca cggcgcacca ccccgctctc gtgcccacca 120  
cacctagggt gtccttatcg tgctcgtcgt tcggccacat ggtgaccccg cccaccgaca 180  
caccgccgat caccgccacc aagaagcagg acgacaagcc gaagccgacg ccggaggccg 240  
ccaccgcggc gaactacgag tcgttggtgt cgcccaagcg cctcatgcag cgcgctgccc 300  
gcgctttccg ccgcagcagg tcgcgcgccc gcgtcaggac ggtcaaggac ctgcccagg 360  
aacgggcctc agtgctcgcc gccagcaaca aggtctccga tgaagcggcc gcggctaccg 420  
cggtgccgcc tgc 433

<210> 3326

<211> 437

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-D12

<400> 3326

attcacgggt cgaccacgc gtccgcccac gttccgcgc aggcgggtgg tcggcgtctc 60  
actatcaaca accgcgccgc tccggttaaa tttctcctca accggcaagc gcaattctgt 120  
gcctcaatca attcggtcgt aaggcaattg agcaagcaat atatatatat atatatatat 180  
atatatagga gattcttcga gcgagctagt agcgagatgg gttccgccgt cctcttttac 240  
tgcatctgca tcgccgccgt cgtcgcattg tcgtcgtcca tggtcgccgt cgggtccgcc 300  
gccccggggg aaacccccaa gttcatctcg gcgagcgccc ttgagtgtc cgctaacgta 360  
acggaaatag caaaggcgcg caagctgac gatgtccatg gccacgggct gtgcccgggtg 420

cggttcgnac acacgcg

437

<210> 3327

<211> 431

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-D2

<400> 3327

cgccggtcta gaactcacgg gtcgacgcac gcgtccaggt gagcgcccg c gactcggtga 60  
agctgacggg cgggcccagag tacgcggtgc ccctggggcg gcgcgactcg ctctgtgtcca 120  
accgcgagga cgccgacaac ctgccggggc cggacatcgc ggtgcccag ctcatcgacg 180  
agttcgacaa gcagggcttc aacgtcgagg agatggtcgc gatgctgggc ggcggccaca 240  
gcatcgcggt ccgcaagtgc ttccttcac gagaccgacg cggcgcccat cgaccccaag 300  
tacaagaaga cgatcagcga cgcgtgcgac ggcaaggact cgggctccgt cnccatggac 360  
tccacctcgc ccaacgacct ggacgggagc tacttcggcc tgggtgctgga gaaaaaatg 420  
ccgctcaaca t 431

<210> 3328

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-D5

<400> 3328

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cgcagtgccg ccccgaggcg ctggtgcagc aggtggccgc cgcggcgcg gaggccggcg 120  
tgggcctggc cggcgagaac gcgctgccgc gctacgacga cacggcgac gaccaggtgg 180  
tggccacggc cgccgacagg gccgcccagg accgcatggt ggccttcacg tacctgcgca 240  
tggggcccga cctgttccag cccgacaact ggcgccgctt cgccgcgttc gtcaagcgca 300  
tgacggagcc gggcgcgcg gaggcgtgcc gggagcaggt ggagcgggag gccgagggcg 360  
tcgcgcacgc caccagccc ctctgtgcag aggccgccgt cgcgctcacc aactgaccgg 420  
a 421

<210> 3329  
 <211> 417  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-D6

<400> 3329

ccacgcgtcc gataataatg aaaggtcccg cccttttctt ccgagatcca caacggggga 60  
 ggggaaaaca cgtacattca cccggcggca ataatggcct cggttccggc tccggcgacg 120  
 acgaccgccg ccgtcctcct atgcctatgc gtcgtcctcg cctgtgccgc ggctgactac 180  
 ccgaatctct ccgactacgt catccatagc cgcgtgtact gcgacacctg ccgcgccggg 240  
 ttcgtgacca acgtcaccga gtacatcgcg ggcgccaaagg tgaggctgga gtgcaagcac 300  
 ttcggcaccg gcaagctcga gcgcgccatc gacgggggtca ccgacgcgac cggcacctat 360  
 acgatcgagc tcaatgacag ccacgaggag gacatctgcc aggtgggtgct ggtgggc 417

<210> 3330  
 <211> 394  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-D7

<400> 3330

ccacgcgtcc gaggggtgtca gaccgtaact gacagctatt tagcaataat acatacatag 60  
 ctataccctc tttaggtcaa gaggggtggag ttctccttat tcggaggaag agctccatcc 120  
 tcattctaca ataccaaacc aataaatggc ctctagccca cagtcctcgc catcctcctc 180  
 caagaagtcg tcgacaccac aagaagcatc ggctttggcg ccaaaatcat cttcaaagtc 240  
 atcctcgcca ccaaagggtg agtcaaattc ttctcccatt cctccatcga aatcgtccct 300  
 gtcaccagcg ccagtaccag agaaaagtgg tagtacgtct atctctaaag atgggaacac 360  
 gaagaagtcg tcctcatcgg cgtcctcggc agat 394

<210> 3331  
 <211> 422  
 <212> DNA  
 <213> Zea mays



<223> unsure at all n locations  
<223> Clone ID: LIB148-037-Q1-E1-D8

<400> 3331

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cctccctcac caaataaggt cccgcccttt tccgacattc acagggggga caggaaatca 120  
gcggccatgg cctcgattcc ggcgacgacc ttcgccgtca tcttatccgt cctcttctgt 180  
gccgcggctg gcaccgcgt cgacaacgac ctccccgact acgtcatcca gggccgcgtc 240  
tattgcgaca cctgccgcgc cgggttcgtg accaatgtca ccgagtacat cgcgggcgcc 300  
aaggtgaggc tggagtgcaa gcacttcggc accggcaagc tcgagcgctc catcgacggg 360  
gtgaccgacg ggaacggcac gtacacgac gaactcangg acaaccacga ggaggacatc 420  
tg 422

<210> 3332  
<211> 405  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-D9

<400> 3332

cacgcgtccg ggcgaaggac ggcagcggca agttcaagac catcaacgag gcgctcgccg 60  
ccatgccaaa gacctacgac ggaagatacg tgatccaagt gaaggaggga gtgtacgagg 120  
agtacgtgac catcaccaag actatgaaga acgtgacctt cttaggtgac ggctccaaga 180  
agtccatcgt caccggcaag aagagcttcg ccgacgggat cagcactttc aagactgcaa 240  
ccttcactgc gcaaggcgac ggattcatgg cgatcgggat ggggttccaa aacacggccg 300  
gcgcggagaa gcaccaggcg gtggcgctgc tgggtgcagtc ggacaagtcc atcttctca 360  
actgcaagat ggacgggttc caggacacgc tgtacgcgca ctcca 405

<210> 3333  
<211> 447  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-E10

<400> 3333

gggtcgacgc acgcgtccga ggacacttgg gcggacgcgt gggttcggta ggtgcattgc 60  
ttcgggtggc caccatggcg cagcgagcgg tggccacgat gacgactaat aagcccctcc 120  
tcctcctcgc cctggcgctc gcgctccttg gtgcggcgcc ggccgccgcg aacgcgcccc 180  
gcggggcgctt cagcaactgg gtggcgatga accagcagag ctacgcgctg tacgcgcaga 240  
agtccgtcgg ggacgggggc aaggagcccc tggacaagaa gctgtcggag gcggagaaga 300  
agaaggtcac gtacgtggtg gacccagcg gcaaggcgca ctacaccaac atcaccgcgg 360  
cgctggagga tatcccgtg agcaacacca agcgcgtgat cctggatctc aagcccggcg 420  
ctcagttccg cgagaagctg ttctga 447

<210> 3334

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-E12

<400> 3334

cacgcgtccg gcaaaaacca ccatccgtcg tcgccaaccg tagcaaggag ccaaggacat 60  
caccaccgcc cagcaataat ggcgagagc atgaggattg tggcgctggc cttggtggcc 120  
ctgctggtgg tggcgggcggc ggcgcccgtg gccaccgcgt acggctgcta cgacgactgc 180  
tacgagcgct gcgccaacgg caagaaagac cccgcctgca ccaagatgtg caaccaggcg 240  
tgcggtccca cggaccaggg cgccggtgcc gccggcgccg cgccggcttg atcgcccagc 300  
gcattcatcg cttcagctcg atataatcgc tgctccgtca gcaaccaca tatgattcga 360  
tcaatcttcc tcctctaatt tctcgacccc gtgaatttt tttcctttct attctttctac 420  
tataactacta tta 433

<210> 3335

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-E2

<400> 3335

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 cccaccata tccggccagc ccaacgaaaa tgtcgcgcgc cacagctgcg gtcctcttct 120  
 acatcctcgc cgtcgtgcc ctcagcgcgg ccgaggcacc ggcagagtca ccgaaggcag 180  
 gcagtcctgc caaggcaccg gccgagtcac cgaaggcagg cagtcctgca gtccttgcca 240  
 aggcacccga gtctgtgcc acgagaactg cccccgtaa ggcacctcaa gccgcctcca 300  
 ccccgccgc tgccgtgcc ccatcgtcgt cgtcgtctag gaagtctggg ccagctgccg 360  
 cgccgaccac cgccgcctct acaccgtctt cttccacgga cgaagagttg agccct 416

<210> 3336

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-E4

<400> 3336

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 ccaaccgtag caaggagcca aggacatcac caccgccag caataatggc gcagagcatg 120  
 aggattgtgg cgctggcctt ggtggccctg ctggtgggtg cggcggcggc gcccgaggcc 180  
 accgcgtacg gctgctacga cgactgctac gagcgtgcg ccaacggcaa gaaagacccc 240  
 gcctgcacca agatgtgcaa ccaggcgtgc ggctccacgg accagggcgc cggtgccgcc 300  
 ggcgcgcgc cggcttgatc gcccagcgca ttcacgctt cagctcgata taatcgtgc 360  
 tccgtcagca accacatat gattcgatca atcttctctc tctaatttct cgaccccgtc 420  
 gaattttttt ctttt 435

<210> 3337

<211> 432

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-E5

<400> 3337

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aagttcaatt aattcgtggt gatcctagat ataagctaata gtctcccgag gaggttatag 180  
gaaagtttgt gagctttgaa ttgatgatca aaggctccaa acaaatacacc aacttgaggc 240  
aaggcggcac ctccacacccc gaggtgcaac ccgtcgcatt caaaggcaac agaggaaaag 300  
aaagaatagt ctcaatcaag taggctttcc atcgacgcct ccaagctcga caacgaggaa 360  
atggcactca tcatcaagag cttccgccaa atcctcaagc anaggagagg gaaggagtac 420  
aaaccccgct cc 432

<210> 3338

<211> 384

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-E6

<400> 3338

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gtggtcgcgg cgccgggtgc tggcgggata ggaagatctc catcccagcc tcgcggtcct 120  
agcgcttgag cttgcccgca aggcgggcgc cggcgccggc gccacagggc tgcgcgcaga 180  
tctcacgtgc ggcgccggtc cgtgcctccc cacctgatct cctccccccc atcctacgcg 240  
ccggggcgccc gcgctggctg tccacacgct gctccgctgt cgcgtaacgc gcatctttgg 300  
acagcccaga cactccgctt tcgtttggca gcagccaagc aaagcaagat cccctcttcc 360  
tccactttct atttgctcgc agtg 384

<210> 3339

<211> 427

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-E7

<400> 3339

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ggtgtcggcc gtcgtggcgg cgcgccaggg gatggagaag ccgctgacgg ctgtggcgga 120  
ggcgttcgag gagctggcgc gcggcatgga ggccgatggc ggggagctcc gcctcgctcc 180

cttcagcgac tcttgcgctc tcgtctccgt gctcttcagc agcctcggga tggccttcag 240  
gttcgccgag atcgagtacg tcaccaaggt gaacgatctc atcggtgccg gcaagtccgt 300  
acgcacgttg agcgacatcc tcgacaagga catccagaat gactgcgtaga agaagcaggg 360  
aagccactcc cggaacttac gcacgggtccg tctcggggcnt cggcctcatt aaaggccctc 420  
ttcgagc 427

<210> 3340

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-E8

<400> 3340

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tctttaacct acaccgccac gccacctcga cacgatggcc gacgatgatg ctgccgctgc 120  
tgcccgctgt gctttggagc agcgtgttgc tgctttcact gctgaagaac gccgcgagggc 180  
tgcccgccaa gaagctgcgc gcctggagggc tgccgcgctc gaggccgagc gccgtgacgc 240  
tgccgcgctg gagcaggagc gacgcgatgc tgacgcccat gccttggtcg ccgcggcgga 300  
agttgtgtcg gctactgtcg ctcttcacgc tcaagcagcg gcgatcctca acgtcaagtc 360  
tctcgttccc atcgtctcgc acttcacgc gccgcacttc aaccgatggc gtggcctctt 420  
cctcaacact ctcgagc 437

<210> 3341

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-F1

<400> 3341

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acctctctc ctcgctgtct ctctgtatct gcaactgcaa gcaaggaaat taattaaaag 120  
aagatcggcg ccatggcggc aacgacgacg gggatgcaga tgatgcaggc ggccggcgtg 180  
ctgctgtgct tggttgtgtt ggcggcgtct acgcgggtcg cgctgggcaa ctgccgcgac 240

gactgcatgg ctgcatgcaa cggctggacc atcgtctgcc agctctcctg tgccagcgca 300  
 tgctacggag aagtcgggat cacaacctta ggtacgtcgg ctgtattagc gaaagcagaa 360  
 gcgcctgcat cagcaccaca agcagcacia gagcgaagcg ccgcc 405

<210> 3342  
 <211> 188  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-F2

<400> 3342

ggtcgaccca cgcgtctaca cagcgtccg cccacgcgtc cggcttgta gcacaaataa 60  
 acagatcgat cgattacagc aatggcggcc aaggtgttcc tcctcctccg actcagcatg 120  
 gtcgccgtcg tcctgggtgc catcgccaca gtagtgctcg cggaggaagc cgatccgcgg 180  
 gcactgcc 188

<210> 3343  
 <211> 342  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-037-Q1-E1-F3

<400> 3343

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 cgggaagctc cgggtggggcg tcatccaaat tgaaccgctg tggattacct tcgccaagac 120  
 catgatcatc acgtcaagg aggagctcat catccgcggc gacaagacca ttgacggccg 180  
 cggcgtgcaa gtgcgcatca acaatggcgc gcagctcacg ttgcaattcg tcaacaacgt 240  
 catcatccac aacatccaca tcaacgacat cgtctcctcc aacaaggacg gccgctacgt 300  
 ccgcgactcg ccggaccact tcggctggcg caccgtctcc ga 342

<210> 3344  
 <211> 428  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-F4

<400> 3344

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gacattcaca ngggggacag gaaatcagcg gccatggcct cgattccggc gacgaccttc 120  
gccgtcatct tatccgtcct cttctgtgcc gcggtggca ccgccgtcga caacgacctc 180  
cccgactacg tcatccaggg ccgctctat tgcgacacct gccgcgccgg gttcgtgacc 240  
aatgtcaccc agtacatcg gggcgccaag gtgaggctgg agtgcaagca cttcggcacc 300  
ggcaagctcg agcgctccat cgacggggtg accgacggga acggcacgta cacgatcgag 360  
ctcaaggaca gccacgagga ggacatctgc gaggtggtct tgggtggagag cccgcgcata 420  
gactgcga 428

<210> 3345

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-F5

<400> 3345

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agcggcagcc acacggccga gatgcacgag tccctttcca atggagccgg cggcaccctg 120  
ccccctccca acggtcgggc agcggctgcc gggggggcgc ggtcgcgcct gggccgcgac 180  
gggcccgcct ccgagctgga cgtgatgaag gagaagttct ccaagctcct gttaggcgag 240  
gacatgtccg gcaccggcaa gggcgtgccg tccgcgctcg cgctgtccaa cgccatcacc 300  
aaccttgccg cgtccgtctt cggcgagcag cgcaagctgg agcccatggc gcccgacacc 360  
aaggagcgct ggaagaggga agtcggatgg ctgctctccg tcaccgacct caacgt 416

<210> 3346

<211> 339

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-F6

<400> 3346

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ttaggacggt caaggacctc gccgacgaac gggcgcccggt gctcgccgcc agcagcaagg 120  
tctccgacgc ggcgtctgcg gtgccgccgc tgcctcctgg tgctgagacc gccagcagca 180  
acggtgcccc cgggcgccagc gtggaggtgg aggataagca gcggcgccgc cacgacgact 240  
gccaccccca ggctcgttccc gagaagatca tacgggagga cgcgccgcca gttgttgcg 300  
agaccgctgc ggccccacca ccacggaggt ggaggtgga 339

<210> 3347

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-F7

<400> 3347

ggtctagaac tcccgggtcg acccacgcgt ccgcccacac gttctgcgaa cgcgtgggcg 60  
gacgcgtggg cggacgcgtg gggcctggcc tgggctggcc gcctccgacc accgtacgtc 120  
ctccaccgcg tcgccgccgg ccggcctctg ccagcccg gctgcctgcg agggcttctg 180  
atggccctcg acgccgtcct ttctcctag tgcccagctt tattgcagat ccagccctct 240  
gatcctcgtc ttctttcacc tctccaacat gaaggtaaac accaagatca agctggagcc 300  
ggtcatgggg ccgtcgtcgt ccctgccgcg gagcgccagc gagctaccgc acccgccgtc 360  
aacgttcagc tccaacacgg cgcaccaccc cgttctcgtg ccaccacac ctaggttgtc 420  
cttatcctgc tc 432

<210> 3348

<211> 193

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-G11

<400> 3348

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gtaaaacctc caactccaag tcgtaccctt cctaaaggta caaccgggaa cccatggccc 120  
ggtcaaaaac ttcaggtgga acaatcccaa aattcaacag ttcaaggagc cagcccgtaa 180



acaagggggt taa

193

<210> 3349

<211> 237

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-G2

<400> 3349

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tggccgcacc cgcaatgggg tgcgcggcgt cggccgcca cggggccggg ccccgccggc 120

gggggtgggc gcgggcgcgg atacgggggt acagcgagga gtcgacctcg ggtctgcagc 180

cgccgtcgcc gccgcgcaa gaggccagcg agtcgtcgga cgggggcaag aggcgag 237

<210> 3350

<211> 383

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-030-Q1-E1-E3

<400> 3350

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acgtgactat gctgaggctc cacgggtggg aggtgtcgcg cgagtgcgcg cgcacgctgc 120

gcgtcgccac cattctgctg aagaaggggtg tggagagggg cctcaccgcc ttccacatcg 180

ggagcatcat gtgcagagag accctgacca aggagtccgc catcgaagag atcgtccgtg 240

aggcggcgga acggggagga ggatgcgaga ctgtcttctt gcangctgtc tcggagatca 300

tggaccgccc tctcgacgac atcaaagaac atgttagcct ctagatatgc acatggctga 360

caaaataacg atgtaatcaa etc 383

<210> 3351

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E5

<400> 3351

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tccatggctg tcctcctgag ccactatcgt cctcgtcta cactatttgc atttaciaaac 120  
gaggaacgag tgaagcaacg gctagcactc taccagggcg tcatccctat tcacatgcag 180  
ttctctgacg acgcagaaga aactttctcc agagcaatta gcagcttgct gaaagcacia 240  
tatgtgaaga agggagacta cgtcactctt gttagagcg gagtgacttc aatctggaga 300  
gaggaatcca ctaccacat ccaagtgagg aaagttcagg tctgatgtgc cgggtgggaat 360  
tggtcgtctg agaaattttg atagcgccgc ctgatgtgtt atcatcatt 409

<210> 3352

<211> 394

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E6

<400> 3352

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cctccccctc cggcgccccg gcgcagcagc gcgacagccg acagccggtc ggccagccag 120  
cagcgcgggg ctgagcctgc caggccgcct gagttgacct ctgtcctccc cctccctgcg 180  
ttttgttctg aggaagaaag cctgttttgc gaaaatgcct cgacaaaata gactgcaata 240  
cgttcctgag cttcgaggaa tcgacagtca agctttgacg accaagtgat caagctcttc 300  
gagttctacg agattgaata ccctgagcat ctgtttggtg aagggtgatg ctggagactt 360  
cgctgatgac gatgatgagt tttaagtcca acga 394

<210> 3353

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E7

<400> 3353

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cttacciaaca acagcagcag caagcccacc cgttcgacga catggcccg ctcggcgccg 120  
gcgccgtgtt ggcgctccta gtggcggtcg cggcggtggc cgcgttcctc gcggtgccg 180

cctcggcgaa gtccggggag ctgagcgca tggggttgct ggccggcgaag ggccggcagcg 240  
 gcgcggggccc gcagaagtgc tcggggcgcg tggggcgagtg cgacgtggac gaggcggagg 300  
 agctcgggct gagcggcgcc gccctcggct ccgacgacgc ggtgcggcgg acgctggcgc 360  
 agcgggaagcc gaccaaccgg tacatcagct acgcggcgct gcg 403

<210> 3354  
 <211> 227  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E8

<400> 3354

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 cagcttacca acaccaacag caccaggccc acgcgttoga caacatggcc cgcctcggcg 120  
 ccggcgccat gttggcactc cgagtggcgg tcgcggtggt ggccgcgttc atcccgggtga 180  
 cggctctcggc gaagtctctc gacctgaggc cgatgggggt gctggcg 227

<210> 3355  
 <211> 324  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E9

<400> 3355

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 cgccggcgatg attgcgggcg cggacaccgt ctgagtcoga tagcggacgt cgatcggctc 120  
 ggcgtcgtcg gagccgagcg cgtaaagtgt aactgcgtag cgcaataaccg cgataaggca 180  
 aatggcggca cggagctgcg tcgtgtggag cacgtcgtgg atcgaagacc gctagcaacg 240  
 agagatgttg caccctgccca gcagggttgc gttgaatttg ccgcaaccgg acatgaggca 300  
 gcgaatttat gtagaagtgg aatg 324

<210> 3356  
 <211> 436  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-F10

<400> 3356

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ccgggcctgg tgggtccttc gacatcacca agttgggcgc ctccggcaat ggcaagacag 180  
acagcacgaa ggctgtgcag gaggcattgg catcggcgtg cggcggcact gggaagcaga 240  
caatcctcat acccaagggg gacttccttg tcggacaact caacttcaca ggcccttgca 300  
agggcgacgt gaccatccag gtggatggca atctgtctggc gaccacggac ctaagccagt 360  
acaaggacca tggtaattgg atcgagattc tacgcgtgga taacctgggc atcaccggca 420  
aaggaaacct tgacgg 436

<210> 3357

<211> 395

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-F11

<400> 3357

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tggtatctca tccttgatga tgatctagct cactagttct ttttaatttc cgcttcattc 180  
gcttttccaa attcgattgt gtttcagcca agttgttttag cgggacatct cttgtctgat 240  
cttcctgcta aatagagttg gactcctata tatagaggcc ttccggcaca tataatatac 300  
gtcggaccaa tattattgtg atcactagtt atgtctctat atgttgcgac ggggataaaa 360  
aatttgaatg aaacatagat cacatttcac acaat 395

<210> 3358

<211> 439

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-F12

<400> 3358

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 ggcctcctcc cgcaggcgct gggtaagggt aggggaggca ggggacacgg tggcgccgctc 120  
 aacccgcagg tcgccggcat ctgctctcgc accccgttcc cggagggtgtg cacgtccacc 180  
 gccgggcggc acgcgtccaa gtacccggtc atcgacaacc tggcgtgct gaacatgcag 240  
 gtggacgcgt tcgccaagcg caccgcgcag gcgcgcaagc acgtcgcgag gtcggccccg 300  
 accatccccg cgcagcagac gcaggcgctc acgttctgcy acaccatgta catgaacacg 360  
 caggacacca tcggcgcggc gcagcggggc atcacgttca aggacaccgg caccgccaag 420  
 atcatgctgc agctcgccg 439

<210> 3359  
 <211> 363  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-030-Q1-E1-F2  
  
 <400> 3359

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 ccacgtctcc tacagcgcaa tcaccatggc gtcggcgagg gccaaagatac gtgcatggaa 120  
 agagtgggag aaagaagctg caggacaaga ctacgagttc tcacatgacc cgacgcggtt 180  
 caagttcacc cagcagactt ccttcgtgag gcagcatatg aatgtgctga acaagttccc 240  
 agcatcattc tacatcagca acttcttccg gcagttcttc aggtccgtga ggcangcaga 300  
 ctactgcgcy ctgcgccaca gctttgtcaa cgtccatctg gcccttgga gcaagtttga 360  
 ttt 363

<210> 3360  
 <211> 390  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-030-Q1-E1-F3  
  
 <400> 3360

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gccggcgacg atcgacgagg gatgaacgcc agagacccgg cggctgacgac gatggctccg 120  
 cgcagctcat cggcggcgac gtgcctgtgc ctgctctcg ccgcggccac gctggcgctg 180  
 gcccacgggg cgcaaggagg aggaccatcg gcatcgcgcg cggacctgga caaggctact 240  
 gccgagacct tcctcgacat cgagatcgac ggcaagcctg caggccggat cgtgctggga 300  
 ctgtttgggg acaccgttcc taacacagca gagaacttcc gagcactttg cacaggggag 360  
 aaaggaatgg ccaagtccgg caagcctcta 390

<210> 3361  
 <211> 381  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-F4

<400> 3361  
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 cttcattagc acgctaactt gtaatctgca ggatctaagc aaagacttga tttagttatg 120  
 gacggattgg taggcctctt gaaagttcgc gtggtcgggg gtatcaacct tgcctaccgc 180  
 gacgcaagag gcagcgatcc gtatgtcgtc ctacggcttg gcaagaagaa actgaagaca 240  
 agcgtgaaga agagatccgt gaaccccata tggcaagagg agctaactct gaccgtcaca 300  
 gatcccagcc aaccactgaa gctgactgtt tgctacagga ggtgttcgac aaggacacct 360  
 tcagcagaga cgacccatgg g 381

<210> 3362  
 <211> 371  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-F5

<400> 3362  
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 agggcggttg tgccacgtat gggttgtctc gcccgcacgt tatccattcc cgactgcgca 180  
 cgaacctgga cggcggcggc acgagttttt gcgcagagag gtcgccgtcg gtgagatttt 240

tctgtcgcgg tgatctgac cccaattgag ttactgtagc atggcgaagt tcagttcaga 300  
 cgcctgacag agccttttga agcttagttt tctctcaatt ttgaatggct acttaacca 360  
 atatctgcat c 371

<210> 3363  
 <211> 385  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-030-Q1-E1-F6  
 <400> 3363

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 gctagccctc gcgctagtgg cggccaccgc cccacaggta gcggaggcaa agaagaagag 180  
 agcggcggag agcggcggag cggcggaggc gaagaagatc caggacgact tctgctcgac 240  
 gctgtgcgag ggcaagaagg ggacggacct ggtcgtgtgc aaggagtcct gcgcgctctc 300  
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 gaagggcatc acggcgccgg ccatg 385

<210> 3364  
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 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-030-Q1-E1-F7  
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 gcggcgtcca ccggcttctc ctgggccaag aagccccggc ccgacgccac gacggcggcg 120  
 gtaactgtga cgatgcggag cggctccatg gggccaggga ccaacaggaa caacaacagc 180  
 ggaggaggag acggagcaag aaccacctcc ggctccggcg ccaccgccac cgccacagca 240  
 gcggcggcac catacgaggc ggagaagcat gaggtgatca agcagtgggc acaggtcgct 300  
 gacgccttca gcgcctctga agcttacaac agcaggttga ggcagacgct tgacgccaag 360  
 cagctcaaga ctggaatgat gcac 384

<210> 3365  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-030-Q1-E1-F8  
  
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 tgatgttcgt gttcggcgac tcgacgctgg acgtcgggaa caacaacttc ctgtcggggg 180  
 cggccgtccc cagggccaac aagccccact acggcgtcga cttccccggc ggccatccca 240  
 ccggaagggt cagcaatggc gacaacacgg ctgacttcgt cgcaagagc atgggggtga 300  
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 agactgctct caccactggg gtcagctacg 390

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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-030-Q1-E1-F9  
  
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 ctgtgccctt cttgtgctgc tcacgtcgcg ctccagcgca acggtgtcga ctgctcatga 180  
 cgagagctgc tggaaggacg acgaccacca ccctatctgc tttcccgaag actgctgggc 240  
 gacctgccag gatcacggcc acgcggacgg ccgctgcaac tgggcatggg cgtggaggcc 300  
 gtattgccag tgccgtttgg cggactgcca ataggcgcca acagctgcgt cgcattggcgt 360  
 cctggctgcc tcgccggccg at 382

<210> 3367  
 <211> 450  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB148-030-Q1-E1-G10

<400> 3367

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ctccaccccg gccgcccggc gccccacag tgccgtaccc cgaccagcca tgcgcatctt 120  
cctgctgtcg ggggagacta acatggccgg ccgccgagga gtacaccaca ggactggga 180  
cggagtggag cccccacaac gcgcgccgga tccgtccatc ctccgccttg cctctgcgca 240  
gcactgggat gaagcccgcg agccgcccta cgccgacatc gacacacca agacctgtgg 300  
catcggggcc gggatggcat tcgcccgcgc tgtgtctctg agcctgcagg aggacacccc 360  
tggcgcggcg gccagatcg ggctcgtgcc gtgcgcggtt ggcgggacgg ccatccggga 420  
gtggtccttc gggaaacatc tgtacgagca 450

<210> 3368

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-G11

<400> 3368

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catgggcgcc gagttcttct cccccacca cttcccgcag ttcaaggagt tcgtgcgaag 120  
cgtcgtgtgc cggcagtggg acgagggaca acggccccc cgacaaggac cgtggcatga 180  
ctgtgtcagg caataccaga tccagggagg ccaaggcggg ttgaagcttc aactcatcgc 240  
cgccccgcc atgtctcagt cagctgtctc gttttatatt tgaagtgcc aaatacttgc 300  
aaatttccgc tgctactaga tttagctgag aagaacgaga tgatccagg attagtggat 360  
caggagttag aaatgtggga tcccacatgc attttttctt ttgccgatgt ttcgtcgtct 420  
tca 423

<210> 3369

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-G12

<400> 3369

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cttttcttgc cacggcaaaa caccttcgcc ggcgagagca tggcgatggc gtaccgtgtc 120

ctggagggtca ccctgggtgtc ggcaaatgac ctcaagaaag tgctcgctctt ctcccggact 180

cgcactctacg ccgtggcttc catctccgga ttcgacctcc gcctcccttc ccacagcacc 240

caagcagacc acagcaacgg ctgcaacccc tgctggaacg ccgtgggtaca cttccccatc 300

ccggctgccg ctgacacccg cggcctcgca ctccacgtga ggctccgcgc ccagcgtcta 360

tacctgggcy atcgcgacat cggcgaagtt gtttggtgcc atcgacgacc tcctggcccg 420

cgccgac 427

<210> 3370

<211> 377

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-G2

<400> 3370

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gagaatgggg cagagattaa gtactccacg gtgcagaatt ggtactccgg tgatgaggag 120

gggagaggag gcatttataa ctttgtgaca aagaggggaa ggtgcaaagg gcgggggttcg 180

aagatctcat ggacacaggt tgagacagga tctgctatta catggaagta cccaagcgtt 240

gagcttgtcg gggatgacag tggtggagag ttctactcgg ttgcgcttac aaacgattgc 300

cagcatgcag acacagggac gatcatgac cacaagggga aaaattcacg cagccggatt 360

atatccaacg gcctctc 377

<210> 3371

<211> 345

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-G4

<400> 3371

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actggctcca tgtgagacct ccgcacgccg ccgctgagggc atcggcagca tgcacggagt 120  
 tgggtgcagac ttctggcgta actgcttctg gacatgaacg gcacccctggg tcgaagcaac 180  
 aacattcttt gtgcctgcaa ggtcttgaac ttgggtgagaa ccaactgtgag tcaaattggg 240  
 tagacagggtg gatggctgta cgtccatggg agaacagggtt acttgactgt aatgccaaag 300  
 agagtctgcc aacgcatgaa gataaggatg acgaagcaaa ttccc 345

<210> 3372  
 <211> 405  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-G5

<400> 3372

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 cgccgcaacc gccacatcag ccatggggcg ctgcgcaccc aagcccaaga cgcttgaagg 120  
 gcaggcccca gctgaggccg ccgtctccac acccaatggt gcgcccaggg ccaactccaat 180  
 ctccgttgag gttgcggctg atgaacagggt agctgagaag gtgggtgggtg aggagccggc 240  
 tgccgcgccc gacgttgagc atcagaaggc taatgagggtg ctgcgtccag acgcggccgt 300  
 cgccgagccc gaccacaatg acgacgaagc cgtggagaag atcgtcttcg atgaggataa 360  
 tccagcggca gcagcccatg cagatgaaaa tgtcaccacc gccgc 405

<210> 3373  
 <211> 439  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-G6

<400> 3373

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 gcgttgggcg ggcttctggc gtcgccgctc tcgactctgg aggcggccct gcggggcctc 180  
 aacctcgcg ccccttcgcg ccccgtagcg gcggcgatgt cggcgccgt gcggtggctg 240  
 ggagtgtacc gggagggtgt gtcgctcggc gtgctgctct cctgggtccc caacatcccc 300

tgggaccgcc agcccttctc ggccctgcgc gacctctgog accccttcct cgccctgtgc 360  
cgtgaagtca tgccccccgt gttcgggggc aagctcgacc tcagcccgt tgttgcacat 420  
aggctattga catcatcat 439

<210> 3374  
<211> 444  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-030-Q1-E1-G7  
  
<400> 3374

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cgccgccgac ctcgtcaccc ccaggaagg cagctccgg cagccgtga cccggggccc 120  
ggcgctgtgg atcaccttcg cgcgcgacat ggtgatcgag ctctgccagg agctcatcgt 180  
gagcagcgac aagaccatcg acgggcgcyg agcgcaagtg cacatcgtgg gcgcgcagat 240  
cacgtgcag aacgtgcga acgtgaccc ccacaacctg cacgtccacg acgccgcggc 300  
gcacggcggc ggcgcgatcc gggactcgca gcaccactgg ggcgtgcgcg gggagagcga 360  
cggcgacggc gtctccgtga tgggggtccag cgatatctgg atcgnacacc tgtccatgag 420  
cagctgcgcg gacgggctgg tgga 444

<210> 3375  
<211> 347  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-030-Q1-E1-G8  
  
<400> 3375

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tgtcttctcc ttaattataa ttattactgg ccagcccatc gccgcatgga tgcacgcacg 120  
gcgctaatta atccttcttg ctactaatta actccgggta attgggtggc caccatgtat 180  
agcgtcgtgg agttctctat attacaccat acagggaaat gtggagaccg gtgttgcatt 240  
ctatacaatt tcttcttata attatatgat tcacgggttt taaaaaaaac aaccacagac 300  
aaaaaaagaa gcacaatacg aaaaaaaagg gcggacgctc tagagga 347

<210> 3376  
 <211> 429  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-030-Q1-E1-G9  
  
 <400> 3376

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gccggccgcc cccacagtgc cgtaccccga ccagccatgc gcatcttcgt gctgtccggg 120
cagagtaaca tggccggccg cggcggcgta cacgacaggc actgggacgg cgtggtgccc 180
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gccgcgagc cgctccacgc cgacatcgac acaaccaaga cctgtggcat cggggccggg 300
atggcattcg cccgcgtgtg gctctcgagc ctgcaggagg acaccctgg cgcggcggcc 360
cagatcgggc tcgtgccgtg cgccgttggt aggacggcca tccgggagtg gtcctcggg 420
aaacatctg 429
  
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<210> 3377  
 <211> 428  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-030-Q1-E1-H1  
  
 <400> 3377

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tacgggctaa ctctggacat gaagatgccg cgggccgacc cttctccaag ccgggtgcc 120
acaagtccgc ctctttctct ccaactccca tgaagccgcc gcggtgggaa tctcacccat 180
aactccctcc aaaccactgc tttccgcaac caacctctgg cccgaacgca gccgctggca 240
actggcatct ccatccagcg gcagatacat ttcaaggagg gaccgcgctc tctggtctca 300
tcaggggaca tattgaatcc ggatcatccc tgctctgac gagagtggat tttgaatctg 360
cagttggctc tatcacctat ccaaacttac gagctgacat tttgcattct nttgcgatgc 420
aaacgaaa 428
  
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<210> 3378  
 <211> 430  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-H11

<400> 3378

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gtggaaagtg tatctgagct gatggcccct cctccccggg actccagcta cggtttccat 180
gttccccggc agaaggagtt ctccaaggag cctctcagc tgcggtccca gctctatctc 240
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gaccatctct acatcgagaa gggctggggc gcacagccgc tgggtggccct cggctacacc 360
cacaggttcc gctccaagtt cgtcacctgc gtctgtaca aaggcatcga gcggtagcct 420
agctaaccat 430
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<210> 3379  
 <211> 384  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-030-Q1-E1-H3

<400> 3379

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ggcaatcctc ccaacacgcc cctccggaag gccgcccctc ggggaacgcc aatgactgca 120
aggcgggggtg ttacgaggtc acggggccact ccaaagagc atggangact gcatgaagag 180
gtgcnaagag atcgtgcta agcaggggcc tanggaccct tacaanggat acanacttga 240
catcccatga actagttaat gtcctatat catctgccta tccatgcatg cattgcattg 300
cgtatgcaca ctgtgcgtgc ctgccacaa agttcgacaa cacaccgatc tcgatggatt 360
tgtaatcggt gtcactcgat cgag 384
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<210> 3380  
 <211> 383

<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-H4

<400> 3380

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 caaggcgtac gtggtgaagg cggccgaggt caccaaggcc tgcagcgtca cctgcgccaa 180  
 ggagaagaac ccgcgcctca gcgagaactg caagagggtcc tgcacccctc ctccttcttg 240  
 aagcgaagcc ccttgaaatg aatgaaccat gcatgcatgc atgtatgcat gcgccggggg 300  
 gacgtggcgt tcagctcaag cgctgaccga gtctatacgt acgtcgtcac cggctggcca 360  
 cgcatgcgat aaccacctga tat 383

<210> 3381  
 <211> 386  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-030-Q1-E1-H5

<400> 3381

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 cgcggaaga agggatctgg aggcataact gtgaagaaga ccggacaggc gctggtgatc 180  
 ggcattctacg acgagcccat gaccctgga cagtgaaca tgggtggtga gaggctcgg 240  
 gactacctcg tagagcaagg cctgtgaatg catccaaaca acgacaccaa cgccaacatt 300  
 aattaattag tagtctccat gccctgngat tgtgcgtggc cgctccgttg aacaccatcc 360  
 atccntcggc ccgcaatttt tcccc 386

<210> 3382  
 <211> 423  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-H6

<400> 3382

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tccgcctccg cctcagtgac gacaaccagc ctgctggcgc tggcgctggc agcgctggct 180

ttcgtctcca gggccgcggc gcagggcaac ggctgttcca gcgtgatgat gaccctggcc 240

ccgtgcatgg acttcatctc cagcaaggcg tcggagccgg ggatctcctg ctgctcggtg 300

ctggccggag tcgtgcagac cgacccccgc tgcctctgca tggtagtgga cggcactgcc 360

acgtccttcg gcacgccat caaccagacc aaggcgctgg agtccccgg cgtctgcaag 420

gtc 423

<210> 3383

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-H7

<400> 3383

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catggctatg gctcgtccg tcgcgcacct cttctttccc atcctcctta tctccaccgc 120

gcccgccgtg cgggcatca ccgacgcgc cggcgccccc ggatacctcc aggaggcgtg 180

caacaagacg ctgttcccca aggtgtgcat gcacgcgctc aaggacaacc cagagtgcc 240

ggcggagacg gcggtaacgc cgcgcgggct ggccgagctg ctgctgtacg tgcggccga 300

ggcgggcatg accgtggcgc cgttcgcgca ccacgagctc aacgccatca aggacgacga 360

cgtcctgtac aagtgcacg acacctgctc cgaggacat 399

<210> 3384

<211> 192

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-H9

<400> 3384

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aacacgtaca ttcacccggc tgcattaatg gcctcgggtc cggctccggc gactaccatc 120  
 gccgccgtca tcctatgcct atgcgtcgtc ctctcctgtg ccgcggtga cgactcgaac 180  
 ctgccgact ac 192

<210> 3385  
 <211> 376  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-A1

<400> 3385

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 gcatattagt tgctatccat tggtaacgca caacagtaaa acgacaaaca tccaacagct 180  
 atattatgtt cgacggtgta acaccctgaa ttttagggta taaaatttct tctctaaatg 240  
 caaaccaaat tcaagtgtta cctcttgtct ctctctctat cttttccttt tgattaaaag 300  
 taagtgaatt aggcgagggg ttaattatct aatttgtcaa aacttatgtg agtcatgaaa 360  
 tgttgtatca tgctga 376

<210> 3386  
 <211> 349  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-A11

<400> 3386

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 ggtatggcgt gcagacagtg gacgtgagca cgggtgtggt cggcgacggc ggggcctgcg 180  
 gcgggtgcta cgaggtgcgc tgcgtggaca gcccagcgg gtgcaagccc agcgcggagg 240  
 cgctggtgtg cgacggcgac cgacctgtgc ccgccaacg accagcagtc cgcgacagc 300  
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<210> 3387

<211> 343  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-031-Q1-E1-A2  
  
 <400> 3387  
  
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 ttgcaagcaa taataatgga gacgacgacg aagctccggt ggagccggcc cggctccttc 180  
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 ttcgacgacc acttgacgaa gcggaaggag ctgccgagg cgtcggcgaa ggaagcgtac 300  
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<210> 3388  
 <211> 184  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-031-Q1-E1-A3  
  
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 gggc 184

<210> 3389  
 <211> 356  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-031-Q1-E1-A6  
  
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gcgactcctc ttcgtcggac gaaagcgaca gggagaagga ggaagatgaa gaagaagcac 180  
atgaggaagt ggccaaggcg cccccgttgg gttggaatca tcacaatcac cacgaagcgg 240  
ccggcggcat tggcaacaac agcaacagga ggcggcttct gtcgaagcag ctgtccatga 300  
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<210> 3390

<211> 290

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-A7

<400> 3390

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cacttcggca ggggcctggt gcagcggatg ccaaggtgcc gctggggctt cttccacgtt 180  
gtcaacaacg actacacgca ctggctcatg tacgccattg gcggcggcga cgcgccaacc 240  
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<210> 3391

<211> 353

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-A8

<400> 3391

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gaggcggagg agagggatgg ggaggacga gaggttcccc gtgtgggagg ccgcgctcgg 180  
cgccggagtc gccgcgcct tcgccgctgg actcgctcgg gtctaccttt ccatgccgga 240  
ctccgactac agcttctca agttgccacg taatctcgag gaactccaaa tcctcactgg 300  
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<210> 3392

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-A9

<400> 3392

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agcgcggtacc aaaggaactg gatcgagatc gagaacgtcg agaacctgtc catcaacggc 180

cacggcacca tcgacgggca gggagccctg gtgtggagca agaaccagtg ccagcattct 240

tacaattgca agatcctccc gaatagcttg gtgctggatt ttgtgacgaa cgtccagatc 300

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gtgctgatcg aca 373

<210> 3393

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-B11

<400> 3393

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caccatcgcc gacttcgtcg agccagaggg gtacatgccc tggaacggcg acttcgcct 180

caagacgtc tactacgcg agtacaacaa ccgcgggccc ggcgcggca ccagcaagag 240

ggtcaactgg cccggcttcc acgtcatcgg acggaaggag gccgagccgt tcaccgccgg 300

gccgttcac gacggcgcca tgtggctcaa gtacaccggc gcgcgcaca tacttgggtt 360

caagttctaa aggccgatg gcatggcata catcacatca tatatagtga 410

<210> 3394

<211> 274

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-B4

<400> 3394

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 atggcagggc agatcgattc taacttaaaa aaaaatttga attcattggc cttcgtttta 180  
 aaccgtaatt acagtcaaat gcctgtcggt attcaactta atccctttga aaaacatccc 240  
 gttttcaata taaggcgcat tgctgaaaat gccc 274

<210> 3395  
 <211> 348  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-031-Q1-E1-B5  
  
 <400> 3395

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 cccgtgccgc ccccttttgt acgcgccgcg gacaccgcaa gcgataaatc cgctacgctc 180  
 gactttttct catcagcacc ggcagcatct gtaaccgcac gggccaaggg cgaccggcgc 240  
 aggcacgctg acatctccgc caatctcag tcgcgccggg gcagcaggca tacggttgcc 300  
 actgaattag agtcatcatc cgcatctcc gttcctatct catcgggg 348

<210> 3396  
 <211> 373  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-031-Q1-E1-B6  
  
 <400> 3396

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 gttcctcaac ggcgccttct gcaaccagtc cggcggccag aacgagcgca agtacgacag 180  
 gctcgacctc atccaggcca agggcggcca gtacgccgag tcgctcacca ggtacgccg 240  
 cgcgtcaac tgccgcgtcg gcaggaagtg ctagtgcggtg tgcagctcta ggctgcagct 300  
 ttcacattg gcgatcgatc gtaacaatgc aaggtttgtt tgtatataac tcttggttt 360

ggaatgccgc ccg

373

<210> 3397

<211> 372

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-031-Q1-E1-B7

<400> 3397

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aaacacgtgc atgcaccccg cggcaataat ggcctcagtt ccggctccgg cgacgacgac 180

cgccgcccga atcctatgcc tatgcgtcgt cctctcctgt gccggggctg acgaccccaa 240

cctccccgac tacgtcatcc agggccgcgt gtactgacac acctgccgcg ccgggttcgt 300

gaccaacgtc accgagtaca tcgcggggcg caaggtgagg ctggagtga ngcacttcgg 360

caccggcaag ct 372

<210> 3398

<211> 369

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-B8

<400> 3398

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tgtcatcccc gccgatttca aggctggcac cacctacaag accactctca gcatctaata 180

agcctctgat aagtgatgac gaataatatt tcgaaagagc tcatctagtc cacgtgccaa 240

cgagccaata tttaaatttt ttctatggtt attttgtggc acaacaccat ctcttcctgt 300

gccttggtgt gttggttgat ttattacat gaattgaaat aactgtgta tttaagattc 360

ttttgggtg 369

<210> 3399

<211> 394

<212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-C11

<400> 3399

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 cgcgctcgggtg cggatcgcgt ccacccagtt ccagaagtcg gagcacgacg cggagatcaa 180  
 ccactcgtct cccgggggacg ccttcgacgc cgtggtgcgc gccaaagctgg ccctggagct 240  
 ggagtgcccc ggggtggtgt cctgcgccga catcctcgcg ctggcgctcg ggggtgctggt 300  
 caccatgacc ggcgggcccc ggtacccgat tccgctgggg cgcaaggact cgctgtcgtc 360  
 gtcgcccaca gcgcccgcg tccagctgcc gcac 394

<210> 3400  
 <211> 86  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-C2

<400> 3400

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 aaaaaaaggg cggacgctct agagga 86

<210> 3401  
 <211> 374  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-C5

<400> 3401

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 gaacgcgccc ggcgggggggt tcagcaactg ggtggcgatg aaccagcaga gctacgcgct 180  
 gtacgcgcag aagtccgtcg gggacggggg caaggagccc ctggacaaga agctgtcgga 240  
 ggcggagaag aagaaggtca cgtacgtggt ggaccccagc ggcaaggcg actacaccaa 300

catcaccgcg gcgctggagg atatccccgt gagcaacacc aagcgcgatga tcctggatct 360  
caagccccggg gctc 374

<210> 3402  
<211> 344  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-031-Q1-E1-C6  
  
<400> 3402

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gaggtaccta actctaccct actatagaga aaaagtcagc acattgcaag cagtaatggt 120  
ggagacgacg acgaagctcc ggtggagccg gcccggtcc ttctctctcg tcgccgcggc 180  
gttctctggcg tccgccgcgcg cgtcggggcg caacgtcggc cagtctgacg accacttgca 240  
gaagcggaag gagctcgccg aggcgtcggc gagggaggcg tacaggcccg acccgtaaa 300  
cgtcaccaac agcttcaacg ccgcgcgtcca cagagctgtc agca 344

<210> 3403  
<211> 348  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-018-Q1-E1-C5  
  
<400> 3403

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gtcggccgtc gcgtgtctct gcctgtacaa cctccttttc gtctccctgt ccgtctcgga 180  
cccggcagca gcaccagccg tccccgcgcg cgcgggtggc caccatggca gcaacgttcc 240  
gtccgggtca ggaaccgcca acgtcgtcct ccgcttcggc ctgtccgggc agccgctcgg 300  
cttcaagaac cccgcttcgc ccgcgggcct cccggagatc gacacctt 348

<210> 3404  
<211> 433  
<212> DNA



<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-C6

<400> 3404

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cggccgctaa gagatgtaga aagtgaaga agttcctccg cagcgcgggc gcgtgctgct 120

gctcgccgtc ggctctctcc gccctgctg gtggtgtgcg cggcaacgaa gaggcgtcga 180

cgtcggcgct ggcttccgcg ccagatggca agaaaaagaa gaggtggagg aagagaaagt 240

tctggagaaa gaagaagaag gccaagaagg agagcgacga tggcagcggc gagctcgtgg 300

atctcgtaa cagcttctcg gccaaagtccg acgtgtgcaa gaacgtgaat gcggccgacg 360

agatcctacg gggctgcaac cagaacatgc ccagcagggc gctgacgttc agccagctgg 420

gcgccgcgac cga 433

<210> 3405

<211> 434

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-C8

<400> 3405

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tttgtaaagg cgcacaatgc aattgcggat tcccattctc ttgaccggaa ttctgggacc 120

acagcattga cggtccttat atttggcagg aactgcttg ttgcgaatgc cggtgactgt 180

cgagctgtat taggaaagcg aggccgagct gttgaactct ctagagacca caaaccacgc 240

tgcatagttg aaaggctcag aatcgaaaac ctgggtggta ccgtctttga tggctacctc 300

aacggtcagc tggtgttagc aagggaatc ggtgattggc acatgaaagg ctccaagggc 360

tctgtatgcc ctcttacacc agaacctgag tttagggagg ttaggcttac tgangaaaat 420

gagttcttga taat 434

<210> 3406

<211> 447

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-D1

<400> 3406

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gcgcaggcgt cgacgaagtc gccgtcgatg aagtcggtgg agaagacctg gagcttgctg 120  
ccgaggccct tggcgaagac ctccggcgatg aacatccgcg cgtagccgtg gatccgcctc 180  
gtcacggggc acacgcacac caccgggttg tcgggcctgg gcgtcacctg gttctccacc 240  
cggtacaaga acccgcgggc cgccaccggc ggctgctgcc ccaggaactt gaggttgctc 300  
tcgaacttgg tctccggcag gtccgtgctg atccagttgt ccctgaggta cccggcgctc 360  
cacaggggct ccccgggccc gggcgccggc gacctgcgcg gcttccacac gcagatgacc 420  
cggcgcggga gcagctccgc gacggtc 447

<210> 3407

<211> 248

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-D12

<400> 3407

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taataacgga tgctactacg taccgtacgg ataatgggta cgtagctaca tgaagctgtc 120  
tacggataat gccgtccgtt tactcctctc acatgtttaa aatttttagtt tcgtttcttt 180  
cgatttcgaa cgctgttgca tattcccaga cccaataata aagaaccoga cagacaatgc 240  
aacaacct 248

<210> 3408

<211> 451

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-D2

<400> 3408

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cgtgcagcca cagacaggcg tccgggcacc atgtctttca cgggcacgca ggacaagtgc 120  
acggcgtgcg acaagaccgt ccacttcacg gacctcctca cggccgacgg cgccatctac 180  
cataagacat gcttcaagtg cagccactgc aaaggggtcc tctcgatgtg cagctactcc 240  
tccatggacg gtgtgctgta ctgcaagacc cacttcgagc agctcttcaa ggagaccggg 300  
agcttctcca agaacttcac gccagggtggc aagtcacag acaaggggtga actgacaagg 360  
gccccaaagca agctgtcgtc tgcattttct ggtaccagg ataagtgcgc agcatgccag 420  
aaaacagtgt acccgctgga gaagttaact c 451

<210> 3409  
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<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
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tttaatcttt ttcagcatat aaattgctac atacataaac tataccttat tttagtttct 180  
acatttaata attttctcac tatattctac tacactttca tgactaatta ttactcccta 240  
aaaaccaa 248

<210> 3410  
<211> 404  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-018-Q1-E1-D5

<400> 3410  
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cttcgttttg ttgggaccaa cttcaccatg gccggggaca gataaacatg ttgacacctat 180  
ctactgggtg atacattggg gttttgacac acggatatgt cagtcctatt ggttgagaga 240  
gcatgctgga tcttcggcca tatgctgtaa atcgcttggt aatttttggt ctactagtag 300

acgaagaaat caaggaaaaa aaaccttgac tacgggaaga aaatcacggc cacaggggta 360  
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<210> 3411  
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 <213> Zea mays  
 <223> Clone ID: LIB148-018-Q1-E1-D7  
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 ccgagcccac gacagaattg aagaaagaca ccgaggagga gatatagatg gagaaggaga 180  
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 agaaagagat cgaccactaa ttggcataca tgtttaagtc gggagagaga ctcggtcacc 300  
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<210> 3412  
 <211> 452  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-018-Q1-E1-D8  
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 tttgttgccg tctcaccgc agttcttgag acatgcagag ccagatagtg tgccacgggt 240  
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 tggtcaccaa tgtgccgct ccagcaatgg agatggctcg acttagatgt ggtggctgcc 360  
 agacattatt gatgtatgct cgcagtcaa caactgtaag atgctcatgt tgtgacacag 420  
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<210> 3413  
 <211> 415  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-018-Q1-E1-D9

<400> 3413

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aagaacgagt tcatgaacct cggcttcgac tacttcgctg acccgacggt cgagatcgct 360
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<210> 3414  
 <211> 418  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-018-Q1-E1-E10

<400> 3414

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aaagacttga tttagttatg gacggattgg taggcctctt gaaagtctgc gtgggtccggg 180
gtatcaacct tgctaccgc gacgcaagag gcagcgatcc gtatgtcgtc ctacggcttg 240
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agctaactct gaccgtcaca gatcccagcc aaccactgaa gctggagggtg ttcgacaagg 360
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<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-018-Q1-E1-E12  
  
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 taatctaaca acgtagctga cctgggcaaa ttgccagcct gacagggggcc aggggtgctcg 180  
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<210> 3416  
 <211> 419  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-018-Q1-E1-E2  
  
 <400> 3416  
  
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 gaggcactaa cagtggcggc gaaacaagag ccagcagcca ccattgagcc tcagcagatt 300  
 gctagtgagg tgaccacttc ggaagtggcg gtcgtcgttg tcgagcctga gaacaaagag 360  
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<210> 3417  
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 <213> Zea mays  
  
 <223> Clone ID: LIB148-018-Q1-E1-E3  
  
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catccacatt gaggttgccg caaacacatc cagtaggtgt gaaggctcgcg gagtgaccgc 240  
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<210> 3418  
 <211> 435  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-018-Q1-E1-E4  
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 ccaacagcca cttcaccgac cagcaccagc tgatgctgtt cggcgccagc aacgacagcc 300  
 cgcaggacgc ggtgatgcag gtcacgggtg cgttcaacca ctccggccgc gggctgggtgc 360  
 agcggatgcc gcgctgccgc tacggcttct tccacgtggt gaacaacgac tacacgcact 420  
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<210> 3419  
 <211> 432  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-018-Q1-E1-E5  
 <400> 3419

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 agacatgctt tccagtttga agtctaaagc caagcagatg gcgacaagtt tcaacatgtc 180  
 aaacttcgct aacagggagg atctgcttgg tcaaagtaaa atgccagatg acatgagcag 240  
 agttgctggg ttagataacc aaggaattgt tggccttcag aggcaaatta tgaaagagca 300  
 agatgagggt ctcgagaagc tggaagagac agtgctgagc acgaagcata ttgcattagc 360

agtcaatgaa gaacttacct tgcacacaag attgatagat gaccttgaag atcatgttga 420  
tggtacaaat tc 432

<210> 3420  
<211> 131  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-E6

<400> 3420

ccacgcgtcc acggacgcgt ggggctagaa tggacagggga tatcgtcgat ctgcaacgcc 60  
caaattctgg atggatgctc cgttgaactg aaaccttttg ctgtaaaaaa gttctctggg 120  
ggttgagtg c 131

<210> 3421  
<211> 220  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-E7

<400> 3421

ccacgcgtcc gcccacgcgt ccggcaagat gcatgtttgt tttagggact aatttttagt 60  
cccttttttag ttcctaaact accaaacatg ccctaagatc acgtgcaagt attttagcaa 120  
tccccctaac cccttccttt tcttttctct ctgatcttcc tctgatgcag aggttgaaga 180  
tacaaatttg tcaggaggtt ctcagacctt cctttgtgtt 220

<210> 3422  
<211> 401  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-E8

<400> 3422

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cgcgcccgac ggcacgacca cggagaagta ctgggagccc gtggaggagg acggcgagca 120  
gcaggcagga agggcaggca ggacaggaa gccgtaccgc gtcgagctcg tcggcatcat 180



ctgcgacgcc tacctcgccg tcgtcagggg catcatgcga gctatcatat ccgggagagc 240  
cgtgcgggtg aactcgcagc tcaagtcgca caagcgcttc gccggcgcggt tccgcaagta 300  
ctgcgacctc gtggacaacg ccaggctcta cagcaccaat accatcgccg gcgcaaagct 360  
gatcgggttg aaggacaatg acaaccggct actggtggac g 401

<210> 3423  
<211> 240  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-E9

<400> 3423

acccacgcgt caggcgcatt ccgccgcagc aggtcacgca gcggtgtcgt caggacggtc 60  
aaggacctcg ccgaggaacg ggcggcgggtg ctccgcgcca gcagcaaggt ctccgacgcg 120  
gcgttcgggg tgccgcgcgt ggctcctggt gtcgagaccg ccaacagcaa cgggtgcccg 180  
cgcggcagcg ttgaagtgga agatatcaac cgcgggccac taacaatgcc aaccgaagt 240

<210> 3424  
<211> 309  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-018-Q1-E1-F1

<400> 3424

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actggcttgc ctggtctgat gatgaccttc cttttgcatg catgcatggt atctcatcct 120  
tgatgatgat ctagctcact agttcttttt aatttccgct tcattcgctt ttccaaattc 180  
gatttgtttt cagccaagtt gtttagcggg acatctcttg tctgatcttc ctgctaaata 240  
gagttggact cctatatata gaggccttcc ggcacatata atatacgtcg gaccaatatt 300  
attgtgatc 309

<210> 3425  
<211> 491  
<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-F10

<400> 3425

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gtccaccatg gcgcagcgag cgggtggccac gatgacgact aataagcccc tcctcctcct 120

cgccctggcg tccgcgctcc ttggtgcggc gccggccgcc gcgaacgcgc ccggcggggc 180

gttcagcaac tgggtggcga tgaaccagca gagctacgcy ctgtacgcgc agaagtccgt 240

cggggacggg ggcaatgagc ccctggacaa gaagctgtcg gaggcggaga agaagaaggt 300

cacgtacgtg gtggacccca tcggcacggg cgactacacc aacatcaccc cggggctgga 360

ggatatcccg gtgagcaaca ccaaacgcgt gatcctggat ctcaaggccg gcgctcattt 420

ccgcgagaag ctgttctga acatcagcaa gccgttcaac acgtgccggg tcggctccaa 480

gaaagccgcc g 491

<210> 3426

<211> 202

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-F11

<400> 3426

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ggcgtgggtc tacgcgcac acggaatata tgtgggcgat gataaggtga tccatttcac 120

aagaggaaga cgacaggagg tcngaacagg aactgtcctc gatattattc ttgtgagttc 180

cacccccaaa cgaagcaaca cg 202

<210> 3427

<211> 498

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-F12

<400> 3427

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 gggcaggaag accgaagacc gagccgtgcg ggggctcggg acgggaacgg gacaggacct 120  
 caaaatctca gatccttctt gcccgccgcg ccgtgcccggt cgacgcgtcg ttcttgccgg 180  
 ccgcgccccca cctccgcctt ctctctctcc agggggatcg gatacgccac aggctgcgcg 240  
 atgggtgctgt ggggtcttcgg ctacggctcc ctcatctgga accccggctt cgacttcgac 300  
 gacaaaatcc tcggcttcat caagggttac aagcgcacct ttaatctcgc ttgcattgac 360  
 cacagaggca caccggagca tccggcgagg acctgcacgc ttgaaaccga cgaagaggcc 420  
 atatgctggg gaattgcata ttgtgtcaag ggtgggtccag aaaaagagct aaaagcaatg 480  
 cagtacttgg agagaaga 498

<210> 3428  
 <211> 361  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-018-Q1-E1-F5  
 <400> 3428

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 ggggtggtgaa taattgaaga agaagaagag gcggagactt gagcagggtga tgtcttcgct 120  
 gccaggaggc ttctgtgctg tgcgcgtcct gcgcgggatc gacctcgta gctgcgacgc 180  
 caagggcagc gacccttacg tcgtgctcag cctggatgga cagaaactga tgacgagcgt 240  
 gatgaagaag acggtgaacc cgttggtgaa cgaggacctc accttggccg tcatggacgc 300  
 gtcggcgccc atcaagctag aggtcttcga taaggacacg ttcagcaagg acgacatgat 360  
 g 361

<210> 3429  
 <211> 433  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-018-Q1-E1-F7  
 <400> 3429

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ccccaacccc aacctaagct atttggtttc ggatctgacc ccaaaaacgt ggagctcaga 120  
 gcattggtgc ctctttcctc tttcaccaag gattccggtg ccttatttca caagacaaaa 180  
 aaagtctcaa gggctcttgat tcttgatga actcaagatt tatggtggat cttggagctg 240  
 tgggatgcta agcctggtct agctactaga ttatgaactc tctgctgac taatagcatt 300  
 tctacaagaa ttcttttgct ggaagggtta ttagttatctt gcaacaatga aggaacatct 360  
 aatgcttaat attgatgacc taagcattct tgagcctaac gaggtcattg ggacagtcaa 420  
 gaataaatca tct 433

<210> 3430  
 <211> 440  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-018-Q1-E1-F8  
  
 <400> 3430

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 gagcacgagt ttgatgctcc agacgacgcc tacatccttg acgcagccga gactgccggt 120  
 gtggagttgc cataactcgtg ccgtgctggg gcttgctcca cctgtgccgg caaaatcgag 180  
 tctggttcgg ttgaccagtc ggatgggtcc ttccttgatg acgggcagca ggaggaaggt 240  
 tatgtgctga catgcgctctc ctacccaaag tccgactgcg tcatccacac ccacaaggaa 300  
 ggcgacctgt actanggcta gggctttcca atttggcgag ggacaaaaaa tgctctcgag 360  
 tgggtgtgtt tcaagcaaag ctctccatc tgcgccctac ccggttgtgc gaactgtttg 420  
 gcatcaaact tgtgtgggtg 440

<210> 3431  
 <211> 458  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-018-Q1-E1-F9  
  
 <400> 3431

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 cggatgatggc gcgtacaggg cttcccgcgc gcgatctcag ggtactcgac ccgttactct 120

cgtacccgtc cacgatcctg ggccgcgagc gcgccatcgt cgtcaacctg gagcgcgctca 180  
aagccctgat cacagccaca gaggtgctgc ttccaaacac caaggatccc gcctttgctgc 240  
gcttcgtccg cgacctccag acccgtgtcc tcgcatcttc gtctgacgag gcagctgagt 300  
tcactgacat ggaacgtgaa tcactctaatg ttgcttcacc atttccccta ccaagtgcag 360  
ccagaggaca tgaaatggag atgactaaga agactactgc tgttgtgcct gagatgacta 420  
gtagcagcag tatgcccatt ttagctattg caaaagat 458

<210> 3432  
<211> 223  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-018-Q1-E1-G1

<400> 3432  
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cctggtagca ccatgacacg atggcccggt cgtattttct ggcttgcctg tacttttcag 120  
ttccatgggt ttacaacacc ttttactccc agcagaaaat acataatatg catgtactcg 180  
actttttttc tatagtaata taaacaaagt ttcacatgtg ttt 223

<210> 3433  
<211> 85  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-018-Q1-E1-G10

<400> 3433  
gacccacgcy taagtttttaa gtgacaccaa tttagaaggg aattagagtg gattaaattc 60  
gctcccggtg aaaaatgact cgaag 85

<210> 3434  
<211> 71  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-018-Q1-E1-G11

<400> 3434  
 acccacgcgt catgccaagc gtcccgttcc tgggtttttc ccaactttga aaaaaggcgg 60  
 ggttccccca a 71

<210> 3435  
 <211> 94  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-G12

<400> 3435  
 cgtcagccca cacgtccgcg acaagatggc gtgcacaaac aatgcgatga gageccttgtt 60  
 cctcctgggtc ctcttctgca tegtgcattg tgag 94

<210> 3436  
 <211> 291  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-G2

<400> 3436  
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 ctaataaaac tctcaccgcc gccatccgag agaacaagcc aaccgacccc gtccccaagg 120  
 caatccgtcg ccgacgtacc accgccaccg caggagcgag atggagatga agaggatcct 180  
 cttegcgcgc ctcgtcgta tgcgcgcctc ggccaccgca gtgctggcct ccaccgatgc 240  
 cgccgcgcgc ggcgccccaa ctgcctccga gtgcgccgc gagggctccg c 291

<210> 3437  
 <211> 460  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-018-Q1-E1-G3

<400> 3437  
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 cctcttcgag aaacgaggaa agaaaacatg tcttctcgct gggtagggc ggaggtgtac 120

ccgctgttcg cgacgacagg ggtggcggtg gggatctgcg tgatgcagct ggtgcgcaac 180  
atcaccacca acccgaggt gcgggtgacc aaggagaagc gggcgccgg ggtgctggac 240  
aaccacgacg aggggcgggc ctactcgag cacggcgtgc gcaggttctg gctctccaag 300  
cgccgcgact acatgcaggc catggacaag gtgcccacgg accctaataa gtagacgacg 360  
acgatatacc ccaatgcatg gcaagaagat atatatatca gcacaacgca actgcatgcg 420  
atgctgcttg ttgctgcaat taatccacta tactatatac 460

<210> 3438

<211> 412

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-G4

<400> 3438

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cgtctccaac ggccacttca cgaggcacga ccacgttatg ctgttcgggg ccagcgacgc 120  
cgcgctccaag gacagggaga tgcaggtcac cgtcgcttc aaccacttcg gcaaggggct 180  
ggtgcagcgg atgccgcgct gccgtcacgg cttcttccac gtggtgaaca acgactacac 240  
gcactggctc atgtacgcca tcggcggcag ccggaacccc accatcatca gccagggcaa 300  
ccgcttccgc gccgtcgacg acagcaggtt caaggaggtg accaagcggg agtacacgca 360  
gtacagcgag tacaagaact ggggtgtgaa gtcgcaggac gacctgttcc tc 412

<210> 3439

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-G5

<400> 3439

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gcttccgctg ccctgaggtc ctcttcacgc catccttcat tgggatggaa gctgctggta 120  
tccacgagac cacctacaac tccatcatga agtgcgacgt ggatattagg aaggatctgt 180

atggcaacat cgtcctctcc ggtggtacca ctatgttccc tggcattgct gacaggatga 240  
gcaaggaaat caccgccttg gctcctagca gcatgaagat caagggtggt gctcctccag 300  
aaaggaagta cagtgtctgg attggaggat ccatcctggc atcgctcagc accttccagc 360  
agatgtggat tgccaaggct gagtacgacg agtctggccc gtccatcgtg cacaggaaat 420  
gcttct 426

<210> 3440  
<211> 277  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-G6

<400> 3440

ccacgcgtcc agctggttcg tggatggcgg cgccacaggc tctcctgact atcgctgctg 60  
gtcgtcgtgc tagctgtggt cgccgttgtc gcaaacgtca gtcacaccaa gcctctgact 120  
cctgacgggc gcatggtaca ctacatccac agcaacttca tggacggggc gtgggatccc 180  
tctcacacga tcttctactg cggtcgggac aggtcctgca ccacggattg ctcatacggg 240  
taccatggca ctcacgcgca tgggtacgag ctgcata 277

<210> 3441  
<211> 428  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-G7

<400> 3441

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tcctgggtcg actccagcag cagcacagaa tgggtgccacc aagggttgcta acaacaatca 180  
ggacttctct tctggtacct tcggttttgg cacacctggg gtgtacaaca ttagcccagc 240  
tgtcccagca aatggggcca cgacagcagg tgctatcaac aacggcactg catcaactgc 300  
ctcttctact ctcccctcac aatctggcaa agactatgat ttttcgtcgt taactcaagg 360  
atttttcacc aaacgatgag cgcctagtga gcttgaaaac caagcagacc acaggatcat 420



gttggacg

428

<210> 3442

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-G8

<400> 3442

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tacgggcttc gtttgaggct ggagtcctga ttggcagggtg caagcacaga gctcgatcgc 180  
catgtctttc accggcacgc aggacaagtg caaagcctgc gacaagacgg tccacatcat 240  
cgacctcttc accgcccagc gcgctctcgt ccacaagaca tgcttcaagt gcagccactg 300  
caagggcgtc ctctcgatta gcagctactc ttccatggac ggcgtcctgt actgcaagac 360  
gcactttgaa cagctcttca aggagacagg gaccttctca aagaactttc aaggtggagc 420  
atcttcaaac aagaacgacc aagca 445

<210> 3443

<211> 452

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-H1

<400> 3443

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tgagtatgca actaggggat cattgcatga tctctccat ggtaaaaagg gtgtcaaagg 120  
agcccagcca gggccagtc tgtcatggat gcagcgagct aggattgccg tatgtgctgc 180  
tcgggggtctc gagttcctcc acgagaaggc cgatcctcga gtgggtccacc gcgacatcaa 240  
gtcaagcaac atactgctct ttgacctga tgttgccaag atcggggact tcgacatctc 300  
aaaccaggcc cctgacatgg ctgcgcgcct ccactctact cgcgttcttg gcacctttgg 360  
ctacctgca ccagaatatg ccatgactgg acagcttagc acgaagagtg atgtctacag 420  
ctttggagtt gtgctgctgg agcttttaac cg 452

<210> 3444  
 <211> 409  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-018-Q1-E1-H3  
  
 <400> 3444  
  
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 tccgccagcc tcgctaggag aagcctgctc atggcgcttg gcggggccacc acctccacca 180  
 cggctgctgt gcctagtgtg accccaagca aggctagtct gtttctgtgt atacaatacg 240  
 actgaaaaac taggagaggg gggattcggc caaggcggcc ggtgctctct cctctcctcg 300  
 tagctagttt ttctcctgtg tccagctcag ttcttggtca tccagccgtg ttaggaaaac 360  
 aaaccagcc ccgtgcccat gttgttgaag aatatattag tctggttat 409

<210> 3445  
 <211> 453  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-018-Q1-E1-H4  
  
 <400> 3445  
  
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 ctgcctcaac agctattatt gtaggtgatc gtttgcttgt tgcaaagtgt ggagattcta 180  
 gagctgttat ttctaaagga ggacaggcga ttgcgggttc aagggatcac aaacctgatc 240  
 agacagatga gaggcaaaga attgaggatg caggggggctt tgttatgtgg gctgggacat 300  
 ggagagtggg tggcggttctc gctgtctctc gagcatttgg tgataaactc ttgaagccgt 360  
 atgttggtgc tgaccctgaa atcaaggang aggtgggtga cagctccctc gaatttctca 420  
 tccttgctag cgacggactc tgggatgttg tca 453

<210> 3446

<211> 435  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-018-Q1-E1-H5  
  
 <400> 3446  
  
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 cttgtgcagg ttccagctgt ctcaagattg aagcatgaga atgttgtcca actcgtcgga 180  
 tactgcgccg aagggagcac ccgcgtcctt gcttatgagt atgcaactag gggatcattg 240  
 catgatatcc tccatggtaa aaaggggtgc aaaggagccc agccagggcc agtcctgtca 300  
 tggatgcagc gagctaggat tgccgtatgt gctgctcggg gtctcgagtt cctccacgag 360  
 aaggccgatc ctcgagtggc ccaccgcgac atcaagtcaa gcaacatact gctctttgac 420  
 catgatgttg cgaag 435

<210> 3447  
 <211> 429  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-018-Q1-E1-H6  
  
 <400> 3447  
  
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 gtgggtggcaa atagcctaata cggaagtgtt ttatcagact acttctgggc tctttctgtt 120  
 gtttggacta ctcccttggg ggccactcta ggcattgtct tcacaattcc aatagcaatg 180  
 gttgctgata tgatcattca cggccgtcac tattcagcag tatatatctt tggttctgtc 240  
 caggatatttt caggctttgt tatecggaac cttgcagatc gcttttctcg ttctctaggg 300  
 ctatcatagt ctcataaaac agaacaggcc cttattagag cgtgcatcag gaagctccaa 360  
 ggtcgggttg gttaggccaa tacttcagaa aacctggatc gggagatacc aggaattaat 420  
 ttccctttg 429

<210> 3448  
 <211> 439  
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-H7

<400> 3448

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gatgggaata catgggcac cttctgaaat ccaagcttta ttctactctg ctttacgatg 180  
ctcacgagaa atgcttgctg tgaatgatgg atcgaaaaac ctcatccgtg ccattaataa 240  
caggctcagt gcattgtcct ttcacatcag agaattattac tgggttgaca tgaagaagat 300  
aaatgagata tacagatata agacagaaga atactcacat gatgccacta acaaattcaa 360  
catttaccct gagcaaatcc cttctgggtg tgttgactgg attcctgaga aaggagggtta 420  
ccttatangg aatctgcag 439

<210> 3449

<211> 451

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-H8

<400> 3449

gggtcgacgc acgcgtccag caatggtacc tgaatcagct acaaaccatg atccaatcct 60  
agcggctagc gatctctagt ttatattaca attaggagca agcgatccaa ttatcgatag 120  
agcgcgagat cgategatca tgccgggccg ctccgtgggc tccatcctcc tctcctcct 180  
ccatggcctc ctctgcctgc agctggctgc cttggccgag atggacgacg acgacgtcat 240  
ggaggacggc agctgcatgc atttcagtgt gtcacggccg cctgctccgc cggaggacgc 300  
ggatgagcgg cgcgactatt tccgcgccat gcatgccaaag gatctgttcc ggacgagca 360  
gatgatcacg atgatgggca gcgaccggaa ccgtagcacc atgacggggc gggcgaagga 420  
gtcctccaag ctgccggggg tcaactgtcgc c 451

<210> 3450

<211> 344

<212> DNA

<213> Zea mays

<223>        unsure at all n locations  
<223>        Clone ID: LIB148-018-Q1-E1-H9

<400>        3450

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cttctcatca cgctcgtgct ggaggccgcc cctccggcga ccgccatgga ctgcaaggcc    120  
gggtgtgacg aggtcacggg ccactcgcac atgaacatgg aggactgcat gaagaggtgc    180  
aaggagatcg ctgctaagca agggcctagg gacccttaca aggataacaa acttgacatc    240  
ccatgaacta nttaatgctc ctatatcatc tgcctatcca tgcattgcatt gcattgcgta    300  
tgcacactgt gcgtgcctgc ccacaaagtt cgacaacaca ccga                        344

<210>        3451  
<211>        395  
<212>        DNA  
<213>        Zea mays

<223>        Clone ID: LIB148-019-Q1-E1-A1

<400>        3451

cacgggtcga ccacgcgtc taaccctccc tctctcacac aaataataag gaaagggtccc    60  
gcccttttcc tccgacatcc acaagggggg aggggaaaac acgtacattc acccggcggc    120  
aataatggcc tcggttccgg ctccggcgac gacgaccgcc gccgtcatcc tatgcctatg    180  
cgtcgtcctc tcctgtgccg cggctgacga cccgaacctc cccgactacg tcatccaggg    240  
ccgcgtgtac tgcgacacct gccgcgccg gtctcgtgacc aacgtcaccc agtacatcgc    300  
gggcgccaag gtgaggctgg agtgcaagca ctccggcacc ggcaagctcg agcgcgccat    360  
cgacgggggc accgacgcga ccggcaccta cacga                                395

<210>        3452  
<211>        398  
<212>        DNA  
<213>        Zea mays

<223>        Clone ID: LIB148-019-Q1-E1-A10

<400>        3452

ggtccacgca cgcgtccgga acggtagttt gtcacttgaa gagctgaagg agggtttccg    60

gataaacgat catcctgttc cagaggaaga gataaagatg ttgttacaag cgggcgatat 120  
 acatggaact gacacattag attgtgagga atttgtgaca gtcttgcttc acattaaaaa 180  
 gatgagtaat gacgagtatc tacctaaagc tttcgagtgc ttcgacaaag acgggaatgg 240  
 ttttattgaa atgtccgagt taatggagac tctaagtgat ggtgaactaa agcctgatga 300  
 gcaattgggtt aacgacatta ttcaagaggt tgacaaggat aaggatgggc gcatcagtta 360  
 cccagagttt gaattgatga tgaaaagtgg atcggact 398

<210> 3453

<211> 358

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-A12

<400> 3453

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 agagctagct accgacgaag acaaggcggg caatggccaa ggcgcccttg ccgcttcctg 120  
 cgctgctcgt cctcgccgcc ttcttcttcc accacccttg ctgcacggcg cacggccgcg 180  
 ccgaaaacat ctcgagggtc taggcgcggg tccgcgcccg cgcgtccgag ctgctccgcc 240  
 acgccaccag ccagctcgtc gacctgcccc tcccgcccaa cctctccggc gcggggcgtcc 300  
 gggcctcggc cctcagcgtg cgcaacaacg cgctctgggc cggcggcgctc aacaccaa 358

<210> 3454

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-A2

<400> 3454

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 gcatcatggt ggacgtctgg tggggcatcg ccgaggccga cgggcccggg cagtacaact 120  
 tcaacgggta catggagctc atggagatgg ccaggaagac cgggctcaag gtccaggccg 180  
 tcatgtcctt ccaccagtgc ggcggcaacg tcggcgattc agtcaccata ccacttcctg 240  
 gatgggtctt ggaggagatg gacaaggacc aggacctggc ctacaccgac cggagtggcc 300

gccggaacta cgagtacgtc tccctgggct gcgacgcgat gcccggtgctc aagggccgca 360  
 cccccatcca gtgctacgcc gacttcacgc gcgccttccg cgaccacttc gccaacctca 420  
 ag 422

<210> 3455  
 <211> 377  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-019-Q1-E1-A3  
 <400> 3455

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 cttctgcacg gtgcatgggt agaaggaaga gtcaaagggc atcgatgcga aagcgcccg 120  
 gcctggtggg tccttcgaca tcaccaagtt gggcgccctc ggcaatggca agacagacag 180  
 cacgaaggct gtgcangagg catgggcacg ggcgtgcggc ggcaactggga agcagacaat 240  
 cctcataccc aagggtgact tccttgctcg acaactcaac ttcacaggcc cttgcaagg 300  
 cgacgtgacc atccagggtg atggcaatct gctggcgacc acggacctaa gccagtacaa 360  
 ggaccatggt aattgga 377

<210> 3456  
 <211> 403  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-019-Q1-E1-A4  
 <400> 3456

ggtcgacgcc cgcgtccaac cacacgtccg gcggcgctca agagcgccgg ggtggagggc 60  
 atcatggtgg acgtctggtg gggcatcgcc gagggcgacg ggcccgggca gtacaacttc 120  
 aacgggtaca tggagctcat ggagatggcc aggaagaccg ggctcaaggt ccaggccgctc 180  
 atgtccttcc accagtgcgg cggcaacgtc ggcgattcag tcaccatacc acttcgggga 240  
 tgggtcttgg aggagatgga caaggaccag gacctggcct acaccgaccg gactggccgc 300  
 cggaactacg agtacgtctc cctgggctgc gacgcgatgc cgtgctcaa gggccgcacc 360  
 cccatccagt gctacgccga cttcatgcgc gccttccgcy aac 403

<210> 3457  
 <211> 392  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-E8

<400> 3457

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 aatggccttc aaggaaacag ggagtttctg gttgagggtc taatgcttag tctgttgcac 120  
 catgacaatc tagtaaacctt aattggatac tgcgctgatg gagaccaacg tcttcttgta 180  
 tacgagttta tgccattggg atcacttgag gatcatttgc atgatattcc acctgataag 240  
 gaacctctgg actggaatac acgtatgaag attgctgctg gtgccgcaa gggcttagag 300  
 tacttgcatg ataaggcaag tcctcctggt atttacaggg atttcaagtc ctcaaacatt 360  
 ctactcgggtg aagggtttca tccgaagcta tc 392

<210> 3458  
 <211> 402  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-F1

<400> 3458

ccacgcgtcc gatttccctg tgctccgctc catccaggtc tcctcttgct cataccgcaa 60  
 cgctctatct ctttcgccga gtcctcgaa accctaagag cgtgcttgac cggcggccgc 120  
 gaggtgatgg cgatggacct tgacgcggta gcgaacgcct tcgtggagca ttactaccga 180  
 acgttcgaca ccaaccgcgc ggcgctgggt gggctgtacc aggagacctc catgctcacc 240  
 ttcgagggcc agaagttcca gggccctcc gccattgccg gcaagctcgg atctctccct 300  
 ttccaggcct gcgagcatca gatcgtcacc gtaaactgcc agccatcggg tccccacgga 360  
 agcatgctca tcttcgtcac cggtttcaaa cgcaacgggc cc 402

<210> 3459  
 <211> 87  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB148-023-Q1-E1-F10

<400> 3459

tatagtgagt cgtattaggc cccggttcgc tgcgcggcg cctgcgcgtc cgcgtccccg 60

gctcgcgagg cccccgcttc tccgctc 87

<210> 3460

<211> 399

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-023-Q1-E1-F11

<400> 3460

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gcgccgacaa ggggtggcgat ccgaggcccg tgagctacca ggtgcgcagg ccgcactctg 120

gccgcgcccc cggcgctctc tacttctgct ataagttcac cgaggctccc gccgtctctt 180

gtgtctcgga accggaaagc aaacaagtcc agtacgcaa gaagtacgtg caggactcca 240

agaacacgac ggacaagact atggtgccgc ccaccgtgta cccaccgccg caggccatgg 300

cgcccgcata cccgccgcaa caatattgtt cgccgtacgc ggcgtaccgc cggcagcctt 360

acgggtaccc tgctccgcca ncgtacgggt acaatgctg 399

<210> 3461

<211> 372

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-F2

<400> 3461

ccacgcgtcc ggaatcaaga gtcattctta tgtctttgac attgcacgga tgcagctttt 60

gcctcgacgc ataccagttg actccacact gctgcatgac catcatagcc atgtgacacg 120

gccaacagcg tggcttagtc atataaatgt gacgtaatac ctcgatcaa tgtccacgaa 180

caaggattct acatacgtg tcgcctagat ggctgctgtg gccgaccgct gtattcacta 240

cgaaggtgaa ttccgtctca tcatgaacat catcgtcaat gcactgattc ccttgccgca 300

caaccagtct ggcaatcgcc ctatcggctc gtcaactacc atgctgccga gcgatccgga 360  
ctgtgatttc tc 372

<210> 3462  
<211> 405  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-023-Q1-E1-F5  
  
<400> 3462

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tttctccttt tcttgccacg gcaaaacacc ttcgccggcg agagcatggc gatggcgtag 120  
cgtgtcctgg aggtcaccct ggtgtcggca aatgacctca agaaagtgtc gctcttctcc 180  
cggactcgca tctacgccgt ggcttccatc tccggattcg acctccgcat ccttcccccac 240  
agcaccocaag cagaccacag caacggctgc aacccttgcg ggaacgccgt ggtacacttc 300  
cccatcccgg ctgccgctga caccgcgggc ctgcactcc acgtgaggct ccgcgcccag 360  
cgtctatacc tgggcgatcg cgacatcgga gaggtgtttg tgccc 405

<210> 3463  
<211> 342  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-023-Q1-E1-F6  
  
<400> 3463

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tgggtccacca tggcgcaccg agcgggtggcc acgatgacga ctaataagcc cctcctcctc 120  
gtcgccctgg cgtcggcgct ccttggtgcg gcgccggccg ccgcgaactc tcccgggtggg 180  
gcgttcatca cttgggtggc gatgattcag cagagctacg cgctgtccgc gcagaattcc 240  
atcggggatg ggggcactga gcccttggac gagaagctgt ctgacgcgga gaagaataag 300  
gtcacatacg tgggtggaccc gagagggtact ggctactaca cc 342

<210> 3464  
<211> 392  
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-F7

<400> 3464

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aaaaagggtac aagcaaagaa accttaaacy tgccatggaa cacacgtccc caatggggct 120

atcgttacca tttcaacata cagcaccatt ttctacacac aactttgagt gaagatttat 180

cggacacagg tggtaatcgt ctgacatgtc ctgagatata cggagactga tggtgccagg 240

ctagtggggtt gagtacagga tgagcgcaac cggtagtggt tatatcacgt tctttgtact 300

caagaatttt gtacagacag aaggcgggtgc ggatagcatg ccttgcatac ataataattt 360

caatacaggt tgaaaacttg aaatcaacac aa 392

<210> 3465

<211> 371

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-G1

<400> 3465

ccacgcgtcc gcacacaaat aataaggaaa ggtcccgcgc ttttcctccg acatccacaa 60

gggggggaggg gaaaacacgt acattcaccc ggcggcaata atggcctcgg ttccggctcc 120

ggcgacgacg accgccgcgc tcctcctatg cctatgcgtc gtcctctcct gtgccgcggc 180

tgacgacccg aacctccccg actacgtcat ccagggccgc gtgtactgcg acacctgccg 240

cgccggggttc gtgaccaacg tcaccgagta catcgcgggc gccaaaggta ggctggagtg 300

caagcacttc ggcaccggca agctcgagcg cgccatcgac ggggtcaccg acgcgaccgg 360

cacctacacg a 371

<210> 3466

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-G12

<400> 3466

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tccatgtgag ggttgaagca aacaaagatg aggggtgacgc agagataaca cagctattta 120  
tatcatatag aggggtattgt gctcgtaaag ggatgcatct gaaggagttg atcttggatg 180  
gcactgacat ctccaaagca ataattgact atgccactag caatgccatc acagacattg 240  
tcgtcgggcgc atcaactaag aacacattca tcagaagggt tagaaatccc gatgtcccaa 300  
cgtgtttgat gaagatggcg cctgattatt gcacggtaca tgtcatccac aaggcaaaag 360  
ccatccaggt gaaggcagcc aaagctcctg caccctttgc tactctccct ccaaagcaac 420  
actcgcaacc aaaca 435

<210> 3467

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-G2

<400> 3467

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gtcctgtgta agaaaggac agcggtaggag gtgtcaaagg atcacaggcc gacatacgac 120  
gcagagcgtc aaagggttat cgagtgcggt ggatacatcg aagatgggta cctcaacggc 180  
gtactctctg tgaccgggc tttaggggac tgggacatga agctgccccca aggctctccg 240  
tcgcccctta tcgcagagcc agagatccac tggaccaccc tgacggaaga cgacgagttc 300  
ctcatcatcg gctgcgatgg gatatgggat gtgatgagca gccagcacgc ggtgagcacg 360  
gtccgcaaag gcctccggaa gcacaatgac cccggc 396

<210> 3468

<211> 377

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-G4

<400> 3468

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gcaggcaagg gcgcaaccaa taatagcaag tgtgatcatc cgttgatcca tcttgcta 120

aagcctgcgt gcccttcatt ctctctcgtc tcgatatcga cgacgctccg ttcggctccg 180  
gcaaaccaca tcaagtcgcy atggacatga ataaggtcgc ctgcgccgctc ctgcacgttg 240  
ctgactctgc cactgtggtc atcaccgcag acgcatcggc gtccgcctac agcaaagggt 300  
cttcggccgc gttcactgac gtcggtgccg tacttggcac ctacgtgctc tacttcatcc 360  
cctactacct tcagtaa 377

<210> 3469  
<211> 375  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-G6

<400> 3469

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tggtgtcttg ctttttccct cggctcgggtg gcaggagttc ctttctcctc cttggctcca 180  
ttgtcgctccg ttccttttct tcgtaccccg atttctcttg ctttgtttcc ttgtcgctcg 240  
tgcaccggat ccatgtgtgt tggctcatca tttgtattgt tcttgtccgt ccaactgatt 300  
agagtttctg gcttggtaga agatcacccc gaccttgctt atcgccctcg gttttccgta 360  
ttttttgata ttgag 375

<210> 3470  
<211> 392  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-G8

<400> 3470

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tatggaggaa ggtgagttct ctgaggcccc tgaggacctg gcggcgctcg agaaggacta 180  
cgaggaggtc ggcgctgagt tcgatgaggg cgaggatggc gacgaggggt acgagtacta 240  
gagaagtttg ctgatgacgc agcatcaggg cagtgtgctg cccttatacc gtgatctgcc 300

gtgagttgct cctgctatcg tggtatgtgt gtctgttctg aagtattgtg tggtttacia 360  
cacctgatgt tgtaagagtt gttaattccc ct 392

<210> 3471  
<211> 385  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-023-Q1-E1-H1  
  
<400> 3471

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tccccatccg ggcgaggagc cgtcaccgcc gccaaagctgg cccacgtcct ctccctttgcc 180  
acctcctggg ggcgcgcctt ctggggccacc ttcacgcggc gcatacataat gttcaagaac 240  
ctgccgaggc acatgttcgg caacttgcag agcaagatgt tcccggccta cttcacgctt 300  
atatctgcat ggcgagccat ctccgtcgcc gccttcgcgt accttcaccc gtggaagacg 360  
gcgtccactg tgcagcgcta ccagc 385

<210> 3472  
<211> 399  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-023-Q1-E1-H12  
  
<400> 3472

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tcaccttcga ggccggcaag acgtaccgcc tccgcgtctg caacaccggt atcaaggcgt 120  
cgctcaactt ccgcatccag ggccactaca tgaagctggg cgagctggag ggctcccaca 180  
ccctgcagaa cacgtacgac tcgctcgacg tccacgtcgg ccaactgcctc tccgtgctcg 240  
tcgacgccga ccagaagccc ggcgactact acatggtggc ctccacgcgg ttcacccacg 300  
acgccaaagtc cgcgtccgcc gtcacccgct acgccggctc cagcgccccg ccggcgccga 360  
acatgaccga gccaccggcc ggctgggcct ggtccatca 399

<210> 3473

<211> 442  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-023-Q1-E1-H2  
  
 <400> 3473  
  
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 ctgctcgaac aggggatgta atgacaaccc cttcccctgg aatgcatgtt gatgatgttg 120  
 ctggttccaa cttcgttttc agtaataata acaacaaagc gaagaccctc ctacctaccc 180  
 tatttgcttg agcggctctt gtccgcgcca caagatacca attggtgcgc tgggaatatt 240  
 cagttacgat gacccgcttt agttcagttt cttttttttg ggggttggtt cgatcatttg 300  
 gctgtagcgt gaatcgcttg gacaacagac tccaattact aagcaaatat tttttcttct 360  
 gcatatattt gaagaatctt gttcagggcc ccttttcaaa atgaacgcgg ggaatttttt 420  
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<210> 3474  
 <211> 437  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-023-Q1-E1-H5  
  
 <400> 3474  
  
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 cagtcaagat gatgactcat attctgtcac ttcttcaact gtaacttcag caagagctgg 120  
 gaaaactaag aagacaactg ttgctgttgc acctacattc gtctgtgcta atcgtgctga 180  
 gaagagagga gagttttaca caaaattaga agaaaaacgc aaggcttttg aagaggagaa 240  
 actccaagca gaggccagaa agagggaaga ggaagaagaa gctctaagac aactgaggaa 300  
 gaacttggtc gtccgagcaa aacccatgcc aagcttctac caagaggac cccacacaaa 360  
 ggttgaactt aagaaggggtg ctccaaccct tgcaagggtc acaaaattga cacggagaaa 420  
 gagctgcagt gaaaccc 437

<210> 3475  
 <211> 388  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-H6

<400> 3475

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ggggcatggg caccattccg gcgacaacct tcgcagtaat cataccggtc tgcttccgta 180  
ccacgtgtgg tacagcagtc gacgacaatt gcactaacgg agtctttagt gccacatgt 240  
attgacgaca ctaggcgcgc cgggtgttcgt gaataatgtc atgcactaga tccatggcgc 300  
gaacgtgaag gtggcgtgca agcatctcat cagcgggact gctcgagcgc tccatcgaca 360  
gggtgatgga ctggaaccgt acgtacac 388

<210> 3476

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-H7

<400> 3476

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cctccctcac caaataaggt cccgcccttt tccgacattc acagggggga caggaaatca 120  
gcggccatgg cctcgattcc ggcgacgacc ttgcgcgtca tcttattcgt cctcttctgt 180  
gccgcggctg gcaccgccgt cgacaacgac ctccccgaact acgtcatcca gggccgcgtc 240  
tattgcgaca cctgccgcgc cgggttcgtg accaatgtca ccgagtacat cgcgggcgcc 300  
aaggtgagge tggagtgcaa gcacttcggc accggcaage tcgagcgctc catcgacggg 360  
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<211> 429

<212> DNA

<213> Zea mays

<223> unsure at all n locations

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<400> 3477



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tgaacgccac ctctgtactc gccccacctt atggcgcgtc gtcctgcag taccggccca 180  
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ctggggcaag caaaagcacg gacaggtgct cggcgctgctg caacggcttc cgatttgccc 300  
ggctagatga aagacggctg gggagcatct tctctgggga acaccgcgcg tcatgggtgc 360  
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acccatctc 429

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<223> Clone ID: LIB148-024-Q1-E1-A10  
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<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-024-Q1-E1-A3  
<400> 3479

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ctacactaca ttagagagag gtcgagcgcc cctcctccga tccgccggcc cgccgagagc 180  
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tgctgctggt cgtgtcggcg ctggcgacct tggccccggc cgaggacccc tacctgttct 300  
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tcatca 366

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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-024-Q1-E1-A9  
  
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 acatccgcgc gtagccgtgg atccgcctcg tcacgggcca cacgcacacc accgggttgt 180  
 cgggcctggg cgtcacctg ttctccaccc ggtacaagaa gccgcggccc gccaccggcg 240  
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<210> 3481  
 <211> 391  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-024-Q1-E1-B12  
  
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 gccactggtt ctggggcaag tacgtcaacg tcgacacaca acacggcggc gccagcccga 180  
 gatccaacgg cgtctgatct gagcaagctg cagcaacacc tcggcacctg acctggccat 240  
 gcatgcacac gtatactata atctaacaac gtagctgacc tgggcaaatt gccagcctga 300  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-024-Q1-E1-B2  
  
 <400> 3482

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 ccaagggttcc cccaggaaag aacatcacag ccaactatgg tagtgattgg ctagatgccca 180  
 aggcaacatg gtatggcaag cctacagggtg ccggccccga cgacaatggt ggcggatgtg 240  
 ggtacaagga cgtgaacaag gcccctttca acagcatggg cgcattgtggc aacgtcccca 300  
 tcttcaagga tgggtctgggt tgtggatcct gcttcgagat caagtgcgac aagccagcgg 360  
 agtgctctgg caagcccgtg gtggtataca ttacagacat gaactatgag cccatttgcg 420  
 gcatacactt cgacc 435

<210> 3483  
 <211> 445  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-024-Q1-E1-B6  
  
 <400> 3483

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 anggattggc atatacgtga ttctatgaca ggccacacaa tactgaaggc gacaagtaaa 180  
 tgggttatga tgaacaaact cactaggaag cttgcaagaa ttccagatga agtgcggact 240  
 gaaatagagc catactttgt tgggcgttct gctattgttg atgaagacaa ccgcaagctt 300  
 ccaaaactgc cagaggggtca aagcacttct gcagctaaat atgtgaggac aggcctgact 360  
 cctcgttggg ctgatcttga tataaaccag catgtcaata atgttaaata cattgcgtgg 420  
 aatcttgaga gtgcaccgat tacta 445

<210> 3484  
 <211> 422  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-024-Q1-E1-C11  
  
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 gtgtcgaagc cggcgctccct tccttacagg cccgcctcct ctctgtccgt tctgtcttgg 180  
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 tcatcagtca gatacacttt taccaaggaa tttttcagaa tcaactccag agaggttcag 300  
 ctctcgaagc tagagaacca gagctctacc aaacaggcca ggacgtctct caaatcccca 360  
 gttcagtaac tggctaactg taggagaatg agagagatgg agaacggccg cgctaaacgc 420  
 ga 422

<210> 3485  
 <211> 387  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-024-Q1-E1-C12  
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 gacgtttgtg ggggcaaccg tgcattccatt ccctaccggc gattggggct ggaaggcggg 180  
 gtggcggtgg caattcttcg tcgaagatcg cgcttcgctg tgaagccgct cacatccgcg 240  
 gtcggcgctc ggtgctgcct aaattttggt caagaacagg taccacagga tgaggcgcat 300  
 ggaggatgct gcgatgtgtt cgtgagagat ctaggtcgtc gtctcccagt caactgtggg 360  
 ttgctggacc gttgtctcct tataatg 387

<210> 3486  
 <211> 456  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-024-Q1-E1-C2  
 <400> 3486

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ccgcggggcg cgggtgtccg tggccagctt cggcggcgcg ggcgacggac ggacgctcaa 180  
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ggagctctac gtgcgcgccg ggggtgtggct cacggggccc ttcaacctca cctcgcgcat 300  
gacgctcttc ctgcgcgcgc ggcgcgtcat ccgcgccacg caggacacat caagctggcc 360  
tctgattgaa ccgctgcctt catacgggag aggacgtgag ctgcccggcg gaagatacac 420  
aagtttaatc catggcaatg ggcttcagga tgttgt 456

<210> 3487  
<211> 449  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-024-Q1-E1-C6

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ttcgtcattg ctactctcct cttcgtcgcc atggttgtgg caccgatggc cgaggcaaag 180  
tccgctgatg cccctccgc cgacgcccc gcccccgtg ctgacgcacc tgccgatgga 240  
cctagcggac cggcgggtgc acctggtccc cagggcgctg agggctctatc gggcaatgag 300  
gacgacgatg atgactccac caactaaggc caagcacgtc ggtccggttg catttggaac 360  
aagacatgga agaaaagtga gagcaatgtc gtttaaaaac aaaagtccat aataatgtgt 420  
ggtcacccgt gatatgttct tgctctccc 449

<210> 3488  
<211> 440  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-024-Q1-E1-C8

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cgacgtgtac agcttcggca tcctgctctg ggagacctac tgctgcgcca tggcctaccc 180

caactacagc ctcgccgaca tctcctacca cgctcgtcaag ctgggcatcc ggccggacat 240  
 cccgaggtgc tgcccgcggg cgctggtgga gatcatgacg cgggtgttggg acggcaaccc 300  
 ggacaaccgg ccggagatgt cggaggtggt ggcgctgctg gagaagatcg acaccagcag 360  
 cggcaagggc ggcattgacgc ccgtcgacga cgctcgcgag ggggtgctcct gcttcggcctt 420  
 caaccaccgc agcgtcgcct 440

<210> 3489  
 <211> 434  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-C9

<400> 3489

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 tgatggcctg cttccacagc acgcgaaaca tccccaccat catcaacctg atggagtctt 180  
 cgcgcgccac gcggaagcgt ggcattaccg tctacgccat gcacctcgtg gagctctccg 240  
 agagatcgtc cgccatctgc atggtccaca aagctcgtcg caacggcatg ccgttctgga 300  
 acaggcggcg caacggcgac ggcggcgggc accagctcgt tgtcgccttc gagacgtacc 360  
 agcagctgag ccgcgtgtct atccggggcca tgacggccat ctccgacctg gaaacgattc 420  
 acgaggacgt cgtc 434

<210> 3490  
 <211> 454  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-024-Q1-E1-D2

<400> 3490

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 ctcgacgcgg tcttttcttc ctagtgccca gctttattgc agatccagcc ctctgatcct 180  
 cgtcttcttt cacctctcca acatgaaggt caacaccaag atcaagctgg agccgggtcat 240

ggcgccgctcg tcgtccctgc cgcggagcgc cagcgagcta cccgacccgc cgtcaccggt 300  
cagctccaac acgggcgcacc acccgtctc cgtgcccacc acacctaggt tgtccttate 360  
gtgctcgctcg ttcgggcaca tggtgacccc gccacccgac acaccgccga tcacgccna 420  
caagaagcag gacgacaagc ccaagccgac gccg 454

<210> 3491  
<211> 408  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-024-Q1-E1-D3  
<400> 3491

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aaaaaacaca ctgaacccaa taatccgat ccacagaaac ttttctctcg gtccgttcga 180  
tcgatcgctg ccgtgtcgtt tgccagacac catcagcacc caaaaccatg gcttgaacc 240  
tggctcagtg cgccaccgcc gccgcggcga ccgtcgcgcc ccgcaccct cgcctgctg 300  
cgtcgcgctc cgtctccttc tccgcgagga agccggcggg cggcagcctg cggctgcagc 360  
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<210> 3492  
<211> 436  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-024-Q1-E1-D4  
<400> 3492

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gcagcctgcc tgcgtgtggg gtgatggcta ggcacttcaa gtacgtcatc ctccggcggc 120  
gtgtcgcggc ggggtacgag gcgagggagt tcgccaagca gggcgtcaac cccggcgagc 180  
tcgccatcat ctccaaggaa ccagtggccc cttatgagcg ccctgcactc agcaagggat 240  
acctcttccc tcagaacgct gcaagactgc caggcttcca cacgtgtgtg ggcagcgggt 300  
gagagagact acttcttgaa tgggtactctg agaaaggcat tgaactgac ctgagtactg 360

agattgtgaa ggccgacctt gcttcaaaga ctctgaccag tgcagctgcg gaaaccttca 420  
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<210> 3493  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-D6

<400> 3493

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 tctacatcga cgtcaccgac tacttcatcc aacgcctcgt ctattgctac acctgccgct 240  
 ccgggttcgt gactaatgtc accgagtaca tcgctgccgc caatgtgatg ctg 293

<210> 3494  
 <211> 171  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-E10

<400> 3494

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<210> 3495  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-E2

<400> 3495

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gccccgctga tagcagagggc aaagaagaag agagtcgccg ccgccgccgc cgaggagaag 180  
 aaggtgcagg acaacttctg ctcgacgctg tgcgagggca ggaaggggat ggacctggtg 240  
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 cagtgcagg gcaagtgcac cgagcagaag ggcattaccg cgccgcagat gaaggtgtgc 360  
 caagaggcgt gcgacaagga ctacgtggtc aaggcggctg aggtcaccaa ggcctgcaac 420  
 acaacctgcg 430

<210> 3496  
 <211> 407  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-024-Q1-E1-E9  
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 cattcagga tggagatgaa gaagatcgcc tgcgccgtcc tcgtcgccgc ctcggcggcc 180  
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 gcgcccgccg tcggcgccgc cctcggggcc gccgtgcct ccttcttctg ctactacatt 300  
 cagtgagccg gccggggcgc ccggaggccg aggaagagac gaacgggaga gagagtgaca 360  
 tggctgcgcg cattccgatg cgtgggcatg ttttttgatt cgacaca 407

<210> 3497  
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 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
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 ccacctccta ggtagggcg tgttggaact gccatggggg acaggccggc gccgatcgag 180

aaggtcgcgg tgccggagaa gatggccttg ttctccacg ccgccgtcac gtcaccggga 240  
 cgccagcagc atcacggcgc ctctgcgcac gaggcgcccg ccgcgaacat cacgccgcgg 300  
 acaacaacag ccaggaataa gcagcagcac ctgccggtga gccncggggc gtgcctctgc 360  
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<210> 3498

<211> 375

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-F12

<400> 3498

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 ctagccctcg cgctagtggc ggccaccgcc ccacaggtag cggaggcaaa gaagaagaga 180  
 gcggcgagga gcggcgaggg ggccgaggcg aagaagatcc aggacgactt ctgctcgacg 240  
 ctgtgcgagg gcaagaaggg gacggacctg gtcgtgtgca aggagtcttg cgcgctctcc 300  
 cagcagtcca acctggtgct gtacggcagg atccagtgca agggcaaatg caccgagcag 360  
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<210> 3499

<211> 451

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-024-Q1-E1-F3

<400> 3499

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 tctcctcttc gtcgccatgg ttgtggcacc gatggccgag gcaaagtccg ctgatgcccc 180  
 ctccgccgat gccccgccc ccgctgctga cgcacctgcc gatggacctg gcggaccggc 240  
 aggtgcacct ggtccccagg gcgtcgaggg actatcgggc aatgaggacg acgacgatga 300  
 ctccaccaac taaggccaag cacgtcggtc cgattgcatt tggaacaaga tatgaaagaa 360

aagtgagagc aatgtttgttt aaaaccaaaa atccataata atgtgtgggc atccgtgata 420  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-F8

<400> 3500

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 cgatcgctccg ccggcgcgac ttgaactaac gacgacgtac gtgcgaccgg gccgggcgtt 180  
 ggattagtcc ggcttgagca atgggcaaga tcgagtactg cgtggtagcg cacggagcag 240  
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<210> 3501  
 <211> 444  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-024-Q1-E1-F9

<400> 3501

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 tacgtcatcc agggccggt gtactgcgac acctgccggy ccgggttcgt gaccaacgtc 300  
 accgagtaca tcgcggggcg caaggtgagg ctggagtga ggcacttcgg caccggcaag 360  
 ctcgagcggy ccatcgacgg ggtcaccgac gcgaccggca cctacacgat cgagcctcaa 420  
 gacagccacg angaggacat ctgc 444

<210> 3502

<211> 56  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-024-Q1-E1-G1  
  
 <400> 3502  
  
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<210> 3503  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-024-Q1-E1-G10  
  
 <400> 3503  
  
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 catcctgatt ataatgtttg agatgccttt taacatttgg tgtggtggat gcaattccat 180  
 gatagcgaag ggagtaagat ttaatgctga gaagaaacac gttgggaatt attactctac 240  
 caagatatgg agcttcatca tgaaatcgcc ctgttgcaag catgggattg tcatacagac 300  
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<210> 3504  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-024-Q1-E1-G9  
  
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 attccatgat agcgaaggga gtaagattta atgctgagaa gaaacaagtt ggaaattatt 240  
 actctaccaa gatatggagc ttcacatga aatcgccctg ttgcaagcat gaaattgtca 300

tacagacaga cccaaaaaat actgaatatg tcataatcag tggggcccag aagaagacag 360  
aagattttga tggtgaggat gcagagacat tgctgctgcc agcagatgaa gatcgagac 419

<210> 3505  
<211> 391  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H12

<400> 3505

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tcgaggacct cgacatctat gtctcaagct tcttagcgtg atctgctgga tgtaatgtaa 180  
ccgatgaacg ctagggaatg ggaatctgag gcagctgtta ctgttaccat gagttgctct 240  
ctgccgtttg tccaggggca gagcagggaa gaacacatgt tcttctctcg cccgtcccgt 300  
tgtaaacctt aggatgtgag aatattgaat gtcccatctc tctctctctt tttcttcggt 360  
cgagggtttg caaggaaaac aatttcataa t 391

<210> 3506  
<211> 449  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H7

<400> 3506

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acagagcgct tcatggtgaa gaaacaggac gggctggtga agctgcaggg gtccaagcaa 120  
gggaggaagg ggcagctcgc gatcgacgcc gagatcttcg aggtgacacc ggcctttcac 180  
gtcgtcgagg tgaagaagtc ggcagggcgc acgctggagt atgagatggt ctgcagcaag 240  
ggcctaagac cttcactcag cgacatctgc tggagcagcc gatctgagga gaacatggct 300  
ccttcagtgg ttcagccatc acaattggag ccctctctt agaccgtctc cgacagttta 360  
ctcaccctc ttagtcaatt gttatttaag tgcagtctct tcggagatgc aattacagtc 420  
catctctct tttttttccc tttctcaaa 449

<210> 3507  
<211> 275  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-A10

<400> 3507

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tcgccgctgc aactgcaacc catgccatgc cggcttagtg attgggtata atttggcttg 120  
gcagcagcca gcattattat gtgctgatct gttatctttt actagtttgg tcgtccgata 180  
tctttctttt tttttccccc cttttcgact ctgtactgaa actgctgaga gattcgcagt 240  
attgttgtat cgtattcata tgctactgtt actct 275

<210> 3508  
<211> 381  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-A11

<400> 3508

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cctttcaccc aatacatata tctatctgag ccctttcccg cggtgaggcc cgaccggagt 120  
ccacacacac acggtgtcga tggcgggcgt aataaggagc cgccgccgcy tgtccgtttt 180  
cttctacgtc gtctctgccc cagctgcagc tgcagccgcy gcgcaagcat ccaataacgt 240  
cacctccgac gaggagtact gggcgaggcy cgccgaggtg gctcggtcgc gcaacctcgc 300  
cgcttacgtc agcgaccccg tggcgccac gaaccgttc aacgcggacg tgctgagggc 360  
cacgacgcyg cgggcgctgg c 381

<210> 3509  
<211> 446  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-012-Q1-E1-F1

<400> 3509

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ggccccggca gagtcaccga aggaaggcag tgctgccaaag gcacctgagg ctgccaagag 180

aactgctgcc cccgctgaag caccgggagc cgcgtccacc cccgtcgccg ccgctgcccc 240

atcatcgctc tctaggaagt ctggtccagc taccgcgcca gccaccgcct ctacaccccc 300

ttcttccacg gacgaggagt tgagcccttc cccgccagca tccaccgccg cggcgtcccc 360

tgccgctgan ggaccggctg ctgatgactc cgccggtgct gctgcccttg gaagtggagc 420

tgccatcgcc ggcgttgccg ctgctg 446

<210> 3510

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-F11

<400> 3510

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cagaatcccc cgaaccatcg agtttttgaa cgcaagttgc gcccgagcc ttctggcgga 120

gggcacgtct gcctgggcgt cacgcgtgct cgctgcgccc tcttgcttcc acccccggca 180

gcggcagggg caggaggaga cgacggtcgc caccggcgcc ctgcaccggc ggatgtcgga 240

tcgggagctc cgcacctgct gctccatcag aatcacaggg gacggtcgat gcctgttcag 300

gtccgtcgcc tacggcgctt gcctgaggag aggaaagcat gcgcccagcg acagcgccca 360

gaaggaactg gccgacgagc tccgagccaa agtagctgat gaggctcgtca agcgaagagg 420

agacaccgaa t 431

<210> 3511

<211> 365

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-F7

<400> 3511

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aaggagcaca tgcattccttc atggagtcag tgcctttcaa cacaatatgc accttcacac 120  
tcttccagct aatctatctg ttgatcgtct ttgggatgac atggatacca gtagcatgaa 180  
tcctcttccc actgctcttc ttcttctca ttatcatcag gcagcacttc atcccgaaat 240  
atattgatcc gatccacctg agggaattac atgcagccga atacgacgaa ctgaaaggtt 300  
ttacacctga tccatcagtg tgtgatgacg agtctgttcg cagcggagat gctcatcctg 360  
gatat 365

<210> 3512  
<211> 312  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G1

<400> 3512

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cctaggggaag ggagaaggga cgttgggtgg gggtgagcca aatgagaacg cacggatata 120  
tctattgatg taatcttgag atgccctctc aaatcactgt aatgggggttt aaaaaacaat 180  
cattgtaatg ggagttatat atacttttat cttaacatth atttacacca gcaagtcctg 240  
gtgtatgcat gctgtaccgt gtttactagt gaacactaca ctggcggacg ggtccgcgcc 300  
accgcgatca ga 312

<210> 3513  
<211> 455  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G11

<400> 3513

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accaacacaa atcatgggggt tggggatcgg ctgcactcag gcaggccgcg catcgtatcc 180  
tcgtgtggga ttgtgatcgg agggcacggc aattcctcgc cataatggat acaccatagt 240



cgagccgcat tctgtcgtca accgagcatg gcgcgacatt attcaaggctc aagaacagggt 300  
accgcaggat gaggggcatg gaggatgatg tgacgagttc gtgaggctcgt cgtctcccag 360  
tcaacttttg gttgctggat cattgtctca tatgatgtaa ttattttattt tattttgtac 420  
agaactccta ttatatagta aagatgtgac attcg 455

<210> 3514

<211> 374

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G3

<400> 3514

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ccaaccggcg gaaaaaggct cacaaggccg gccggaccca ttccgaaccc ttccccggcc 120  
ggcggacggc cggcgaaccc ggggccgaag caacgcccc aaggcaacgc acgcacgggt 180  
ctaacggccc gtttccgttg aacctcaag cccgggaacc ctgcgggccg gttccggctg 240  
ccccaaaaac ttagtacgtt catgaacacg acccgcttgg tcaggtctct ggaaatgtgc 300  
aacctgcatg tgttttgctt gcgagcgttt ttcttttggc tgctgaccga tcgtgaatcc 360  
gtcacgcagc actc 374

<210> 3515

<211> 463

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G5

<400> 3515

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gcggcgatga aggcagccgt ggccgctctg ctggtgttcg ccgcggtgtc gcctgccgcg 120  
cgcgcggttg cggcggaggc ggaggcgaag gcgaaagctg tgggaagcgc gccgtcggtg 180  
cccgtggct cgctggacat cgcgcagctg ggcgccaaagg gcgacggcaa gtcggacagc 240  
accccgatgg tgctcaaggc gtggaagcac gcgtgcgaag cgacggggca gcagaagatc 300  
gtcatcccca agggcaacta cctgacgggc gcgctggacc tgggtgggcc ctgcaagtcc 360

tccatcatca tccgcctcga cggcaacctg ctcggcacccg gcgacctcaa cgcgatacaag 420  
 aggaactgga tcgagatcca gaacgtcgac aacctgtcca tca 463

<210> 3516  
 <211> 455  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-012-Q1-E1-G6  
 <400> 3516

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 cgacgacgcy ccgccacagc cacatggcgg acgacgccgt cgccgccgga ggcggccgttt 120  
 gctgcygagc gccggcctcg ctgtcttcta gcaggaagca gcagcagcag cccgacgacg 180  
 ccggctgcgg cagcagcagc agcagcagc actaccagca cgacgtgatc atgctgaggg 240  
 ggacgaggag cggggcggga ttcccgccgc cgatctccgt gatcggcaag ggcggggcggc 300  
 cgtggctctg cctgcggggc caccgcgagg gtggacgcct cgtgctgcgg cagatgcgcc 360  
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 acccgagggc ccgcgcgcgg ccgtgcgggg gcggc 455

<210> 3517  
 <211> 456  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-012-Q1-E1-G8  
 <400> 3517

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 gtcgcagtga aggcgggggc cgtggccgcy ctgctgctgg tcgcagcggg gtcgcctgcc 120  
 gcgcgcgcgg cggcggtggc ggtggcggga ggggcgcggt cggtgccggc ggggtccgctg 180  
 gacatcgcy agctgggggc caagggcgac ggcaagtccg acagcaccgc gatgatcttc 240  
 aaggcgtgga agaacgcgtg cgaggcgacg ggggtacaga agatcgatcat cccgccgggc 300  
 aactacctga cgggggggct ggagctgaag ggccctgca agtcctccat catcatccgt 360  
 ctcgacggca nctgctcgg caccggcgac ctcagcgcgt agcanaggaa ctggatcgag 420

atcgagaacg tcgagaacct gtccatcaac ggccac

456

<210> 3518

<211> 210

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G9

<400> 3518

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tgcctataaa tagtgaacag tattccgtta ctgttcacgc attctgattt ttgcaatcgc 120

atctctcgga atacaacctt tgtcaaggca taggtattat tgtatttaat gattcaatgt 180

attaagtgaat tatgatataa tgtatctgtg 210

<210> 3519

<211> 468

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-H1

<400> 3519

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tgcacttgctc cgacgactac agcaagccgc tgacctggga caccgcgta aggattgctg 120

ttggtacagc ttgtgctctg gactacactac atgacgcgtg ttcacctcca gtgatccaca 180

agaacatcaa ggcacccaac gtcttgctcg atgtgacct caacctcac ctactgact 240

gcggccttgc atacttctat gaggatccga gtcagagcct gggaccaggg tacgacccctc 300

cagagtgcac aaggccatca gggtacgtta tgaagagcga tgtctactgc tttggtgtcg 360

tcatgcttca gctgttgacc ggccggaagc cctacgacag ctccaagcct agagcggagc 420

agtccttgggt caagtttgtc ggtccacagc ttcacgacac caacgcct 468

<210> 3520

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-H11

<400> 3520

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gaaaaattgc taggcttgag agcctcatgg atggaacttt accagctgaa gaattcatga 120

atgaagagtt tttatcactt atgaatgagc ataagatcct ccaaaagaaa tatgaaaacc 180

atcctgatgt tttgcatgct gaaattgagg taaagagact ccaggaggaa ttggacatgt 240

tcaggaactc tgtggacgag aaagaagttc tacaggagga gatacaagat ctgaaaaatc 300

agttgcatta tatgctttca tcatcgatc caatccgtag gctctggcct ccagtgccgt 360

tgtctcaggg aagtaattct gaacgtggaa caaaagatat agatggagat actaattttg 420

tggaactc 429

<210> 3521

<211> 452

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-H5

<400> 3521

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cgacgacgtg ccgccacatc cacatggcgg acgacgccgt cgccggcgga gcggccgttc 120

gctgcgacgg gccggcgccg gcctcgctgt cttctagcag gaagcagcag cagcagcccc 180

acgacgccgg ctgcggcagc agcgacgacc actaccagca cgacgtgacg atgctgaggg 240

ggacgaggag cggggcgggc ttcccgcgcg cgatctccgt gatcggaag ggccggcggc 300

cgtggctctg cctgccggcg caacgcgaag gtggacgcct cgtgctgccg gaaatgcgcc 360

tgccgtcgca aggactgctg caaccctgca aggaggacgg caggttcaag ctctcatgc 420

acccggaggc ccgcgcgcgg ccgtgcgggg gc 452

<210> 3522

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-H6

<400> 3522

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 ccaagtcttg ggaggtgatc tgcgacgagc acggcatcga ccacacgggc aagtacgccg 180  
 gcgactccga cctccagctc gagcgcatca acgtctacta caatgaggcc ggcgggggcc 240  
 ggttcgtccc gcgcgccgtg ctcatggacc tcgagcccg caccatggac tccgtgcgct 300  
 ccggccccta cggccagatc ttccgccccg acaacttcgt cttcggccag tccggcgccg 360  
 gcaacaactg ggccaagggc cactacaccg agggcgccga gctcatcgac tccgtgctcg 420  
 acgtcgtccg c 431

<210> 3523  
 <211> 364  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-012-Q1-E1-H7  
 <400> 3523

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 accatgtccg tctacgacga tgtcatccct gccaaactgga aggccaacac cgcctacacc 180  
 gccaaataat taactttagt gctgacaata ctttaagccg acctatgcta gctatactag 240  
 attgggttgg atcccaagca atgcattaca catgcatgca ttggaccgtg atatctattt 300  
 gctaccacta ccctattacg acagtgatgc tggcgccaac aatgatgggtg tcctcctcct 360  
 tctc 364

<210> 3524  
 <211> 444  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-013-Q1-E1-A6  
 <400> 3524

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 gcaattataa tctcacagaa taataaacat catggggcaa gcctcacggc tcgtcctcct 120

cgccgtcgtg gcgctgctgt ccgccgggct cctcccgcag gcgctgggta agggtagggg 180  
aagcaagcgg aggagagcgg cgatgcggcg gaggccatga agatccagga cgacttctgc 240  
tcgacgctgt gcgagggcaa gaaggggacg gacctggtcg tgtgcaagga ctctgcgcg 300  
ctctcccagc agtccagcct gctgctgtac ggcaggatcc agtgcaaggg caaatgcacc 360  
gagcagtaac ggcatactg cgccgggcca taacgtctgc caggaggagt gcgacaaggc 420  
gtacgtggtg aaggcggccg aggt 444

<210> 3525  
<211> 283  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-A7

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ggcgctgag ctgcgcact gcacgaggct cctgcagcac gatccgttca acggcgacgg 180  
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ctgcttggat gccgcggacc ttgtggtcga gaccatgtcc cct 283

<210> 3526  
<211> 308  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-A8

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tgggagtcat ggcgatgctg tatgtcatct gctccgccct cgtgtcgggt acggctgtca 180  
gagccgtgct ggcgtcagtc gcatcgtagg cgccgtccta agcgtccacc agcacttccg 240  
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gctctctc 308

<210> 3527  
 <211> 365  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-013-Q1-E1-A9

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 ggcggcatga tccgcgactc gaagcggcac tacgggctgc gcacgcggag cgacggcgac 180  
 ggcgtctccg tgctgtcgtc cagcaacgtg tggatcgacc acgtgtccat gtccagctgc 240  
 tccgacgggc tgatcgacgt ggtgaacggg tcgacggcca tcaccgtgtc caacangcac 300  
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 gtgat 365

<210> 3528  
 <211> 410  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-013-Q1-E1-B12

<400> 3528  
  
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 ccgcgtcgcc gccggccggc ctctgcccag cccgggctgc ctgcgagggc ttctgatggc 120  
 cctcgacgcc gtcctttcct cctagtgcc agctttattg cagatccagc cctctgatcc 180  
 tcgtcttctt tcacctctcc aacatgaagg tcaacaccaa gatcaagctg gagccggtca 240  
 tggcgccgtc gtcgtccctg ccgcggagcg ccagcgagct acgcgaccg ccgtcaccgt 300  
 tcagctccaa cacggtgcac caccctgtct cagtgcacac cacacctagg ttgtccttat 360  
 cgtgctcgtc gttcggccac atggtgaccc cgcccaacga cacaccgccc 410

<210> 3529  
 <211> 412  
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-013-Q1-E1-B2

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catcatcagc gagaacgcgg gcggtgtccc gatgcacctg gtgatcatgc ggagcgacaa 180  
ggccatcatg ttgcacacgg tcaccacggn gccgtcgctg ctgagggtgc ccaaggggaa 240  
ctgccgcctc gatctccgca gcaagcaagt cggcgccaag gactgcgccg cgcacgccgt 300  
cgagtttgat tacgcgacag gcggtgtcag ggccctcaag gtcttgacgg acgtgtggtg 360  
ctcgtcgggc gcgctcgacg ccgagggcaa cctggtgcag accggcggtc ac 412

<210> 3530

<211> 453

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B5

<400> 3530

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gcacgggaag ctgcctcgcc gacgagagcc acatcatctg ggacaagggc cacgtcgtgc 180  
aggacctcct cctcaggctc cggaacgtcg actccggcgt cgtccacctg cagctcagat 240  
gggtcgccac cccacctgaa gactgaactg gaggagacga actgcagtat gtacgtgctc 300  
tcgtccata tccccatggg aagaacgtac ggattcgctc gcgtgacgat gatactatgc 360  
gatgcatgca tgctcaagag tcaagatgtc actgtcttct gtgtatttta gtacagccac 420  
gtacattgtc gccatccaac atcactatgc atg 453

<210> 3531

<211> 299

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B6



<400> 3531

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ctttcctccc ctattcatca agaccgcaat aactgtcgct acctatgctt ctcacttgtg 180  
atTTTTggac acaatatgtt aagggtccatt caattctaata gagacgcctg atgaggctac 240  
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<210> 3532

<211> 352

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B7

<400> 3532

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cggctccggc aaaccacatc aagtcgcat ggagatgaag aaggtegcct gcgccgtcct 180  
cgccgccgcc gcttcgccca gcgtggtcct cgccgccgag gtcccggcgc gcggccgcat 240  
cagcgctcc tcggccgcgt tcccgggcgt cggcgccgtg ctgggcgcct ccgtgctctc 300  
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<210> 3533

<211> 193

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B8

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ggagggataa attacgtcac aattgtcaca acttaggtct cctacttctt cttttgttac 180  
acagtatctt aaa 193

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 <213> Zea mays  
  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-013-Q1-E1-C2  
  
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gtcctggccg ccacattagc gctgttcctc cgcgccgccg ccgcaacggc cgcgacggct 180  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-C3

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 aacctggtgc tgtacggcac gatccagtgc acaggcaagt gcaccgatca gcatggcatc 360  
 acagcgccgg tcatgaatgt ctgccaggag gagtgcgagt cggcgtacgt ggtgaatgcg 420  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-C5

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tcaagctctc caggetctag tctgateggc tccccccct ggaattctcc atggcggtg 240  
ccttctcaga aaatctcacg cgacctccga atgaaagtga tgtaagctac taacgattct 300  
tgttagagcc aggaaagagg ctctccagcc aattataaat ttattcctca agctctgagg 360  
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<212> DNA  
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<223> Clone ID: LIB148-013-Q1-E1-C7

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acggcgccat cgagccggtg gcgctgccgt cgtcgacgtc gagggggcgg ctgtccatca 180  
gcgtgagcaa gaagctgagc ctgaatatcc cggacaagct gcggctgagc cggcgggagc 240  
acaaggacca ccaccatcac aaggtggagt cggaggacac gctgtggaag aagggcacatca 300  
tcctcgggga gaagtgcagg atcccggggg agcgggaggg ggagtgcgct gaccccgacg 360  
acgacatcgc cgccgccagc ttccgccggt ccagctactc ccggcccgtg tcgcggtcga 420  
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<210> 3540  
<211> 446  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
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tgtcgtaaat tcttatatca agaacttcga tgcaaagtgc aacactggaa gcactgctaa 180

cagtgatgct agggacccat cagatacgaa atccagcact aaaattgtta gtagtgctga 240  
 taatgccaaag tgtgtggaca taaaaccgat caatggaagt gataagagca atgacaccag 300  
 tgataagagc aatgacaccg tcgatgctaa tgtgaaatcc aactctggaa ttgttgcaaa 360  
 cagtgatgct agtaacaccg atgtacagac taacactgga agtgtcaaca acagcgatga 420  
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<210> 3541  
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 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
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 ctctctcttc ttacgaccac cgcgcctttt cgccttcggg gccccagat ggggtgcgcc 180  
 ggtgttctct ggagggatcc gtgtcaagggt cgtctcttcc ggcgacttca ctgtcggaga 240  
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 aaccaatgg gggttggcat cctccacca ccattcggct tcaaggattt tcatcatgca 360  
 gcccggtgc agtccccgt cngtggcat ccagaaggat gactaccagc cttgtggtgg 420  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D10

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 cgaggccagg aggcagcaga tcgccggcgc gacctacacc ggtagcctag gagcagccaa 180  
 ccctttctgc accaatgcca gcgatccgtt caccatgtct agcagatttg caccaccggc 240

taatgtgcag ttggcactga tggctcagaa ccaacagcag tattaccagg cgcagcagta 300  
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<210> 3543  
 <211> 275  
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 <213> Zea mays  
 <223> unsure at all n locations  
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 ccctgggtgtc ggcaaagtac ctcaagaaag tgtcgtctt ctcccgact cgcattctacg 180  
 ccgtggcttc catctccgga ttcgacctcc gcactncttc ccacagcacc caagcagacc 240  
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<210> 3544  
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 <213> Zea mays  
 <223> unsure at all n locations  
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 ggtagccagg cagaggcagc ggaaggagag gatgagcttc caggacctgg aggcggggca 180  
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 gggcgccggc gccggcgct cgaggccgt ggcgtcgggc gtcttccaga tcaacaccgc 300  
 ggttgccacg ttccagcgcc tcgtcaacac gctcggcacg cccaaggata cccccgacct 360  
 ccgcgacagg atacataaaa cacggcaaca cataacacaa ctagtgaagg atacatcaga 420  
 caagcttaaa cangctagcg agg 443

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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D6

<400> 3545

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gcgacatcgt caacaacgaa atcgctatgg accggggcat ctccoctggc ctcattegcc 240  
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ccgccggcga cgtcccagag aaggagtcgt ccgccaacgg cttcacccctg gtcggggtca 360  
gaaccatcga catcgccaag tccaccgtag agggcatgtg ccccggaag gtctcgtgcg 420  
cagacatcct ggcttctgcg gcgcg 445

<210> 3546  
<211> 437  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D7

<400> 3546

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<210> 3547  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-013-Q1-E1-D8  
  
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 gggcaccgac tacctgctga aatgcgccgc caggaagaac aagctgtggg tgaggtcgg 180  
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 gctgtacgag atcgactcga agacgcccg gacggagatc gccgccgaga cgtcggccgc 300  
 gttcgccgcc tcgtccatgg tgttccgcga cgacaagaag tactcgcgca agctgctgaa 360  
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 <212> DNA  
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 <223> unsure at all n locations  
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 ggcattctgca ttagcagctc tatcatccgc attcaatcca tcatctcaac aaaggctgtc 240  
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 cttatctaata gcattcaacc catccttaaa acccaaaaca tcacctccat ctcgctcaag 360  
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<210> 3549



<211> 366  
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 <213> Zea mays  
  
 <223> unsure at all n locations  
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 <213> Zea mays  
  
 <223> Clone ID: LIB148-013-Q1-E1-E5  
  
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 <211> 443  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-E6

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<210> 3552

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-E7

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ggctagctgt taacctgtt gatttcttca accaggtgaa catcctgtat ggtactctaa 360  
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<210> 3553

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-E9

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caccaaccaa gatgaacttg gagcgttatg ccaacagatg cactacaaga cgttgtgctc 240

cacgatgacg aactgcctg gggtgactac gccagagcaa ctcttagatg catccctgcg 300

gattacagcg gtgaaggcag cgatggcgga gatgaagcta gacaatgcaa taaaatcagg 360

cagtgtcag ggtaaccga tgatgtcgtc gctaaagaca tgc 403

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-F10

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caaggcgaac cgcacgcga gggcgaagat gttcgacgcc gactcctggc ccgtcggagc 360

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<210> 3555

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-F3

<400> 3555

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 <223> unsure at all n locations  
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 ctgcactaaa cagccagtct aaaactcgat tgattgggcc aaattgccct ggtatcatta 360  
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gcttccctgt agcacgccgc cgtgcgcctg gaaatattca ttggcattgg caatgcaacc 240  
acgatgacgc cctgcctttt tgacgcccc gcatctgctg ctggcgctg gctggctgct 300  
tcttcacacc acatctcgcc cggccccggc ctatctagtt cccatgcgtg tagagatgtt 360  
gttactgctc ccgctggccc atgggcccggc atggaccatg gggatgcana tgcaattgtg 420  
gccagcgatg cgtgcgtac 439

<210> 3558  
<211> 443  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
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gctctcgccg cggccacgct ggcgctggcc cacggggcgc aaggaggagg accatcggca 180  
tcggcgggcg acctggacaa ggtcacggcc gagaccttct tggacatcga gatcgacggc 240  
aagcctgcag gccggatcgt gctgggactg tttggggaca ccgttcctaa aacagcagag 300  
aacttccgag cactttgcac aggggagaaa ggaattgcc agtccggcaa gcctctgtgg 360  
tacaaggggt cgacgttcca caggatcatc ccggggttca tgatccangg aggcgacttc 420  
accaacggca acggcacggg ggg 443

<210> 3559  
<211> 451  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-001-Q1-E1-C7

<400> 3559  
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ggaggcgccg gctccgtctc ccaccagcgg ctccctccg cggtcgcacccg ccatcgtcgg 180  
 ggccgccgtg gcctccttct tcggtacta cattcactga gccgccggac gaggagccgg 240  
 agccggaggg aagagaccaa ggtgggggga gagacttggc tgcgctgcgc tgctctgctg 300  
 ctcccgcgca ttcccgatgc gtgggctgctc tctgattggg cacggcggtg gcagtggcac 360  
 accttcgtct tccttttgtt tgtttttttt ccttcctctt tctacttgat tttcatttaa 420  
 cgaattggta tcgctgatgc accagtttaa t 451

<210> 3560  
 <211> 360  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-C8

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 tccgcggatc gcgccagatc catcacgacc agcgggtcca ccgcggctgc agtcgcgatc 180  
 gtccgtgctg ccttggactc cttcgtcgtt taccacattc actgacttgc cggactatga 240  
 gcctgagcca gatggaatag acgcaagtag ggggacagag ttggctgcgc ttagctgttc 300  
 tgcagctcgc gcgcattccc gaaccctcgg cgtgctccca catgacacgg gggtagtagt 360

<210> 3561  
 <211> 467  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-C9

<400> 3561  
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 aggaagagtc aaagggcatc gatgcgaaag cgtccggggc tggtaggtcc ttcgacatca 180  
 ccaagttggg cgctccggc aatggcaaga cagacagcac gaaggctgtg caggaggcat 240  
 gggcatcggc gtgcggcggc actgggaagc agacaatcct cataccaag ggcgacttcc 300

ttgtcggaca actcaacttc acaggccctt gcaagggcga cgtgaccatc caggtggatg 360  
gcaatctgct ggcgaccacg gacctaagcc agtacaagga ccatggtaat tggatcgaga 420  
ttctacgcgt ggataacctg gtcatcatcg gcaagggaaa ccttgac 467

<210> 3562

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D1

<400> 3562

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gtggtcgcaa ggatggccgg gggcatgcag gcggcggacg cggcgggccc gctgagcgcg 180  
ctgctctcgc tgctcgcgct gcgcgggtc ctcgccgtgc tccagccgct ggccctgctc 240  
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tccgatgccg ccacggcctc gcgcgcgggg gccagcggga ggaaggggaa ggcgtcgtcg 360  
tcgtcgtccg tggttctgcg ggtggccggc ggggtcccca tggtcgcgcg gcggaagcag 420  
gcgtccgcgc gca 433

<210> 3563

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D10

<400> 3563

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cgatggcttc aggcctctc gttctgctgc ttctcatcaa cacaggcttt gtctgccccg 120  
tccattccga ggactgctgg gccgacacc gcgtcatctg caccaagacg cacaactgcc 180  
gggacgacac ttgcgogggg cgcggcatgc cggacggccg ctgccactgg gagttcccca 240  
acctggtgcc cttctgccag tgctgcgcc ccaactgcca ctagtcgggg cgctcggat 300  
tggctcactt cgccggcgat gatggatggt gcccaactgc gactgcccag tctgctccat 360

tcgttgttgt ttaaggcata atatataaac tgccaaattc acatgtattt tgggatattt 420  
ggtatcatatc tatgaaatga ctgtga 446

<210> 3564  
<211> 462  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-001-Q1-E1-D11

<400> 3564

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gagggcagga gcagccgcag tcccggcgat cccgcgcgcg gtcgccctca cacctcctcg 120  
tactgcctt cgtttctctt tccaacaatc aagatgagcc gtggcggttag cgcgggtggt 180  
ggtcaaagtt ctctgggtta cctctttgga agcggtgagc ccccaaacc agcagtggca 240  
ccaccagctg taagtgtcc acctgtgct gcaggtgctc cacctgtga gaaaccacct 300  
gctgcaaagc ctgatggcac cagtcagatt gctgctgggg ttaccagcca aaccaataac 360  
tatcacaggg ctgacggta gaacaccggc aacttcctta cggaccgccc ttcgaccaag 420  
gtccacgctg ctctggcgg tggctcttcc ctngatacc tg 462

<210> 3565  
<211> 446  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D2

<400> 3565

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cctgcctgag ctaccgcac ctgcctcct caccgcgttt cctcgttaa tccggtagaa 120  
aatggccgat gccgaggata tccagccct cgtctgcgac aacggaactg gcatggtcaa 180  
ggctgggttc gccggcgacg acgccccgag ggccgtcttc cccagcatcg tggggcgccc 240  
gcgccacact ggtgtcatgg tcgggatggg gcagaaggac gcctacgtcg gtgacgaggc 300  
gcagtccaag aggggtatcc tgaccctcaa gtaccccatc gagcacggga tcgtcagcaa 360  
ctgggacgac atggagaaga tctggcatca caccttctac aacgagctcc gcgtggctcc 420



cgaggagcac cccgtcctcc tcaccg

446

<210> 3566

<211> 448

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D3

<400> 3566

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acatcggtcg agctcaagat tctatctgat aaatggcgcc ttctcctcgc tggcctcatt 180  
ttccagtaca tacatggttt ggccgctcat ggggttcatt atctgcaccg gccgggccct 240  
acccttcaag atcttggctt catgattctt ccggagcttg ggaaagaaag gggttacatc 300  
agtgaacatc tgtttacatt cgtcttcctc accttcgttt tgtggacatt tcctcctttc 360  
atccttcaga ctaaagcgtt ctacactgtt ctgatatggc gcaagggtact tgccttctta 420  
tgtgcttctc agtttcttcg aataataa 448

<210> 3567

<211> 436

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-001-Q1-E1-D4

<400> 3567

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gcgcacgtcg ccccggggct caccgtcacc accgagcccc aaccaattaa taatatatat 180  
atatagctag gatcgatcgt cagtaaaatg gcaggctccg ccgtcctgag gagccccctg 240  
tccgtcctcc tctacatcct ccgcgccgtg ccgcgccacc ccgcggcgac gccgaccgac 300  
gccgccatcg acgaggcgta ccgcgatctc gtcaacctca ncgctaacca ggagtactgg 360  
gcggagcgcg cggaggcgcc gcacgcgtac aaccgcggcg cgttacagac cgaccccggtg 420

gccgtcgtgc agcgct

436

<210> 3568

<211> 350

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D5

<400> 3568

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gtcagtccta ttggttgaga gagcatgctg gatcttcggc catatgctgt aaatcgcttg 120

ttaatttttg ttctactagt acacgaagaa atcaaggaaa aaaaaccttg actacgggaa 180

gaaaatcacg gccacagggg tattttaacc tccttcctaa tgcgcatata tctatcgaag 240

ttgagtaaac tttgatataa tgtattcatg ggtcacgtcc aaccaaccct gtgattgggt 300

gcttgtaaat ttttgtggcc ttaatcatgg cttcaatgat gtccttcggt 350

<210> 3569

<211> 407

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D6

<400> 3569

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tgcgcgggag caggatgcca tcggctaatt tggtacggac gcggccggat ttggaagagc 180

gcagctagca cgccgccgta gcggtacgct agctcctctc cgagtacctt gcaccaaccg 240

gggggtcttg ctctcaact gatggcaacg gggagttccc ctccggaaat atctcacctg 300

ctccgtccac gcgacgaatc aacttccttg catggatgct atgaacgctt tgctaggaat 360

atttcttctt tatctctgtt cctcgctgcg ataaatcccc aacggga 407

<210> 3570

<211> 460

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D7

<400> 3570

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ccgcccgcgc cccgaggtgc tgcgctagcg ctacggcgctg caagagcaag caggcgtcca 120  
agccgtgctg cgcgacgggtg aagccgggtg cgacgacgag gcacaggcac gggcacgggc 180  
acgggcacgg gcacgcaggc gcggggaagc ccgggacgct aggaggcgac aagcagggtg 240  
aggactgcca tggttgctgc cagaaggaga gcaagccgcc cgaggacgcc gtcgtgatcg 300  
ccattccggg acgggccgtg gagcaccgga aggaggcctt ccctcacgag aacgcgggag 360  
ccgggggggtg ctgcgctgca ggcacgggtg ccgaagacga ggtatgcatt gtcacgagcg 420  
ccaggtcgcc ctgctgcagc accgcgagga gtcgggtctgg 460

<210> 3571

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D8

<400> 3571

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atcggtcgac gagggctgca cgaacgatgg ggtccgcctc cgcctcagtg acgacaacca 120  
gcctgctggc gctggcgctg gcagcgctgg ctttcgtctc cagggccgcg ggcgagggca 180  
acggctgttc cagcgtgatg atgaccctgg ccccgctgat ggacttcac tccagcaagg 240  
cgtcggagcc ggggatctcc tgctgctcgg tgctggccgg agtcgtgcag accgaccccc 300  
gctgcctctg catggtactg gacggcactg ccacgtcctt cggcatcgcc atcaaccaga 360  
ccagggcgct ggagctcccc ggcgtctgca aggtcaagge gccgccgctc agccagtgca 420  
c 421

<210> 3572

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D9

<400> 3572

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gcaaggggca tcttcccgtt gctgggttac ccactcatcg tgaactcagc ggtgtaccgg 180

tttgcttggc ttggaagcct gatcttcagc gcactcttct tttggggcaa gagatttcat 240

gtctgggttca ccaacctcca caactctatc agggatgacc gctatctgat tgggcggagg 300

ctgcacaact ttggcgagga ctcacactca cctgagcgga gtgaatctgg agcaagtata 360

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aggatgaggc gcaataatat gcat 444

<210> 3573

<211> 447

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-E11

<400> 3573

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gccccgccgc cggtagcgcg gcagaagggc gagcactttg acctcaccat accggcggtc 120

ctcaagatcg ccgaggagaa ggccggcatc gtgcccatca cctaccgcaa ggtggcggtc 180

gagaggaaag gcggcatccg gtacacgatc acaggaacc agcactacag cgaggtgaag 240

gtgaccaacg tgggcggcgc cggggacgtg gtggcgctgt ggggtgaagg caacaagcgc 300

gtcaagtgga cgccgatgaa gcgcagctgg ggccagctct ggaccacgga ggtcgacctc 360

accggcgagt cgctgacgtt ccgcgtcatg accgccgacc accgcaaggc tacctcctgg 420

cacgtcacgc cccgcgactg gcagttc 447

<210> 3574

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-E12

<400> 3574

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catggaggac tccggccagt tcatgcagtg ggcgatggct acgctgcagc acgatgagga 180  
ccaggcagtg gactacccca tcgacgacgg ccgcggcggg gctaccttcc cctcgctccg 240  
agcgctccgc gaggcctcgt cgcaagctgc agaaatgac caggaacctc tcgccgccgc 300  
aaacagccgc tgcgccggcg acgggggcac cgcagccgca ggcaataata tctcaggaac 360  
cgcgccaaga agaagcagca gtggtagtgc cgtaatccag cccttgaggt ggaattttgg 420  
cgccggc 427

<210> 3575  
<211> 442  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-001-Q1-E1-E2  
<400> 3575

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gcggcagccg gaacccccacc atcatcagcc agggcaaccg cttccgcgcc gtcgacgaca 180  
gcaggttcaa ggaggtgacc aagcgggagt acacgcagta cagcgagtac aagaactggg 240  
tgtggaagtc gcaggacgac ctgttctca acggcgctt cttcaaccag tccggcggcc 300  
agaacgagcg caagtacgac aggtcgcacc tcatccaggc caagggcggc cagtacgccg 360  
agtcgctcac caggtacgcc ggggcgctca actggcgctg cggcaggaag tgctagtgcg 420  
tgtgcaactc taggtgcag ct 442

<210> 3576  
<211> 396  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-001-Q1-E1-E3  
<400> 3576

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 tgcgacgcgt gcggcgccgc gccggccgcg ctgcgctgag acggcacctg gacgctgtgc 240  
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 ggctgttccg gccctgctga gatgggtggc ctcatctccg ttgaccacc gcctctggag 360  
 caggactttg aggcctggct cgcagacaag ctcccg 396

<210> 3577  
 <211> 434  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-001-Q1-E1-E4

<400> 3577  
  
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 aacttcaagc acacccacgc taaagccggg acgtgtcca tggctaacta cgggcccgcg 180  
 tccaatggct cccagttctt catcaccacc gtagacgaaa accggttgcc caagaagctg 240  
 gacggggccc acgtggtggt cggcaatgtg gtgaaaggga tggacgtcgt gcgcaagatc 300  
 gaagccgagg gccagctcac cggcgtgccc aacgccaacg tcgtcatagc caacatcggg 360  
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 actcacgatt catc 434

<210> 3578  
 <211> 426  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-001-Q1-E1-E5

<400> 3578  
  
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cgaaggtgt gcaggaggca tgggcatcgg cgtgcggcgg cactgggaag cagacaatcc 240  
tcatacccaa gggcgacttc cttgtcggac aactcaactt cacaggccct tgcaagggcg 300  
acgtgaccat ccaggtggat ggcaatctgc tggcgaccac ggacctaac cagtacaag 360  
aacatggtaa ttggatcgag attctacgcy tggataacct ggtcatcacc ggcaagggaa 420  
accttg 426

<210> 3579

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-E6

<400> 3579

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aagacttata agtctgtatc cagaagatag gaaagttaaa gcctcagaag gtgctaagat 180  
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tccactgcga cgtaaagcta aagtgccaga catatcttcc tggatagcgg aggccagctg 300  
aagatcgagg ggttcggagt gacaaggatg tccaaagtcg ggaccgacaa cgtgaggttg 360  
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<210> 3580

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-E7

<400> 3580

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ggaaagcccc agctgaggcc accatctcca cacccaaggt tgcacctgag accactacca 180  
tccacattga ggttgccgca aaacatgcag tagttgagaa ggtggaggag gacaaggagg 240  
aggcactaac agtggcggcg aaacaagagc cagcagccac cattgagcct cagcagattg 300

ctagtgaagg gaccacttcg gaagtggcgg tcgtcggtgt cgagcctgag aacaaagagg 360  
aggaggaagt tgtggagaag accgtcatcg agaaggagaa gccatcagca gtccatgcag 420  
aggaaaa 427

<210> 3581  
<211> 222  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-E9

<400> 3581

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gcgatagagc gctgcgagga cctcaacata agcatccgac atcgacatcg agatggacct 180  
agcacatgag cacatcgtga gcaccagat cgcgctgcac ag 222

<210> 3582  
<211> 435  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F10

<400> 3582

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cgtcgtcctc ctctctttcg gactcagacg atgacaagaa gcccaagaag tctaagaaga 180  
agaagctttt tggaagaaaa catccattgc atcatgtcct cggaggaggc aaagccgccg 240  
accttggtgct gtggaggaac aaacaggcat ctgggagcat cttggtaggg gtgaccgtga 300  
tctggttact gttcgagggc atcggtacc acctccttac ctctctttgc cagcactaa 360  
ttgtgtttct caccatctgg ttcattctgt ccaatgctgc gtcatttgc aacaggtcac 420  
ctccaaagtt ccag 435

<210> 3583  
<211> 441  
<212> DNA



<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F12

<400> 3583

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gagggagagc ctcaaggcgg gggatcatat ctactcctgg agggcggcgt gggctctacgc 180  
gcatcagggg atatatgtgg gcgatgataa ggtgatccat ttcacaagag gaagaggaca 240  
ggaggtctga acaggaactg tcgtcgatat tattcttgtg agttccaccc catcacgaag 300  
caacacgcct tgcccgggtg gcaccgacga aaccagcgac agcagcacag agacgaacgg 360  
cgtggtatcc tcttgctca gctgcttctt agctgggggt gctctctacc gtttcgagta 420  
cgcagtcaac ccggcgctct t 441

<210> 3584

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F2

<400> 3584

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cgagctggag gccgtctgcg aggtgatcca agagtgcata gacctgacc cgacgcggcg 180  
gccgtcgatg agagacgtcg tgggcaagct gcgagacgct ctggcatct cgcccgaggc 240  
ggcggcgccc cggtctgctg cgctctgggt ggcggagctg gagctgctgt cggatgaagtc 300  
aacctagtgt ggagaacgct gtgtatactg atactgtacc aacatgttcc aacgctcttc 360  
tagctgagct ctaacaggat tcgtataggg gcttcaattc gtgctgctga tgctaca 417

<210> 3585

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F3

<400> 3585

ccacacgtcc gctctctcgc ggcgcatta cttgcacgta cgagctcaga aggaacgcag 60

aggcaaaagc agccatggcg aactcgtcgt ccggccttgc ggtgaacgac gagtgaagg 120

tgaagttccg ggagctgaag tcgcggcgga gcttccggtt catcgtgttc aggatcgacg 180

acacggacat ggagatcaag gtggaccgcc tcggcggacc gaaccagggc tacggcgact 240

tcaccgacag cctccccgcc aacgagtgcc gctacgcgat ctacgacctc gacttcagca 300

ccatcgagaa ctgccagaag agcacgatca tcttcatctc ctgatcgctt gacactgcac 360

gcaccaggag caagatgctg tacgccagct ccaaggacag gttcaggagg gagctggact 420

gcatccagtg cg 432

<210> 3586

<211> 390

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-001-Q1-E1-F4

<400> 3586

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gtactggacy gcactgccac gtccttcggc atcgccatca accagaccag ggcgctggag 180

ctccccggcg tctgcaaggt caaggcgccg ccgctcagcc agtgcacagg cgtccttgcg 240

gcacctgcac cgacgcctcc cgacgagcca gcagcggcag ctgaggaaga agccgacgca 300

gctgcagatg ccccttcagc anatggagcc tcaagctcca caaactcaaa gaatgcagcg 360

agcttactgc gtctcatctg cgcattgctg 390

<210> 3587

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F5

<400> 3587

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ttctcgtctc gatccccgacg acgctccctt cggctccggc aaaccacatc aagtcgcgat 120  
ggagatgaag aaggctgcct ggcgcgtcct cgcgcgcgcc gcctccgcca cegtggtcct 180  
cgccgccgag gccccggcgc cgcccccac cagcgctcc tcggccgctg tcccggcctg 240  
cggcgcctg ctggggcgct cegtgtctc cttcttcgcc tactacctgc agtaaaatta 300  
aaggaggggc ggaggagat gctgctggct gccattgcct gtattcggtt ggattccgtt 360  
tatatatata tttaagtact ttaatttggg tctgaacatg tcgattgatc cattca 416

<210> 3588

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F6

<400> 3588

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gatggcgaac ccgacgacgg ccgcgggcat gctgcgcgtc ttcttcacg actgcttcgt 120  
caccgggtgc gacgcgtcgg tgctgatcgc gtccaccag ttccagaagt cggagcacga 180  
cgcgagatc aaccactcgc tcgcgggga cgccttcgac gccgtggtgc gcgccaagct 240  
ggcctggag ctggagtgc ccggggtggt gtctgcgcc gacatcctcg cgctggcgtc 300  
gggggtgctg gtcagcatga ccggcgggcc ccggtagccg attccgctgg ggcgcaagga 360  
ctcgctgtcg tcgtcgcca cagcggcga cgtcgagctg ccgcacgcca acttcaccg 419

<210> 3589

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F7

<400> 3589

gggtcgaccc aaacgtccgc agagacgttc cgctgagcgg atcatcgcg aggtgatgca 60  
gacgaagcag atggcgaacc cgacgacggc cgcgggcatg ctgcgcgtct tcttcacga 120  
ctgcttcgtc accgggtgcg acgcgtcggg gctgatcgcg tccaccgag ttccacgaag 180  
tcggagcacg acccgagat caaccactcg ctccccggg acgccttcga cgccgtggtg 240

cgcgccaagc tggccctgga gctggagtgc cccggggtgg tgtcctgcgc cgacatcctc 300  
 gcgctggcgt cgggggtgct ggtcaccatg agcggcgggc cgcggtaccc gattccgctg 360  
 gggcgcaagg actcgctgtc gtcgtcgccc acagcgcccg acttcgagct gccg 414

<210> 3590

<211> 449

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F8

<400> 3590

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 acttcgtagc cgcaagcatt cttccttcct tctccattcc atcggtgacc atggattgaa 120  
 gacattgata ggcttctctg gaggtgcgtg tgagcagctc ggaggtcagc cgccgagaag 180  
 agtcatagg caatggcaac cgcaaggaag gatcctcagc aggttgataa agtcaacctg 240  
 aaacccagcg agtctggcaa aggggtagta cggcgtgcaa ggtctgtccc gacctctccg 300  
 gatcgagat cgtccccatc cccggcccca gtctcagaca acgccagccg accggcatca 360  
 tcaactcaaca ctgcacgac ctgctcccg tccacaacaa catctagctc ggcggcctct 420  
 tcaagccacg ggaagacgat gcgctccgc 449

<210> 3591

<211> 370

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G1

<400> 3591

tccggaatgc cgggtcgac ccacacgtcc ggttgatcct atctactggg tgatacattg 60  
 gtgttttgac acacggatat gtcagtccta ttggttgaga gagcatgctg gatcttcggc 120  
 catatgctgt aaatcgcttg ttaatttttg ttctactagt acacgaagaa atcaaggaaa 180  
 aaaaaccttg actacgggaa gaaaatcacg gccacagggg tattttaacc tccttcctaa 240  
 tgcgcatata tctatcgaag ttgagtaaac tttgatataa tgtattcatg ggtcacgtcc 300  
 aaccaaccct gtgattgggt gcttgtaaata ttttgtggcc ttaatcatgg cttcaatgat 360

gtccttcggt

370

<210> 3592

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G10

<400> 3592

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gttcctttta gcgctcttct gtgtcgtgca tggtgagaat gcaaagtcaa aggacaacga 120  
tgcaaaagcg tccggggcccg gtgggtcctt cgacatcacc aagttgggcg cctccggcaa 180  
tggcaagacg gatagcacga acgctgtgca ggaagcgtgg gcatcagcgt gcggcggcac 240  
cgggaagcac acgatcctca tccccaaggg cgacttcctc gtcggaccac tcaacttcac 300  
atgcccacgc aatggcgacg tgaccatcca ggtgaatggc aatctgctgg cgaccacgga 360  
cctaagccag tacaaggatc atggttaattg gatcgagatt ctacgcgtgg acaaacttgt 420  
catcacgggc 430

<210> 3593

<211> 443

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-001-Q1-E1-G12

<400> 3593

cggaaatccc gggtcgaccc acggtccgg cagttctacc gcaactgcat catctcaggc 60  
actgtggact tcatcttcgg cgacgcggcg gcggtgttcc agaactgcat cctggtgctg 120  
cgccgcccga tggacaacca gcagaacatc gcgaccgcgc agggccgcgc ggacgcgcgc 180  
gaggccacgg ggttcgtgct ccagaagtgc gagttccagg ccgaggccgc gctccgggac 240  
tccggggccc cgcccatccg caactacctg ggccggccgt ggcgcgagtg ctgcgcgacc 300  
atcgatcatg agtcggagct cccggacttc atcgacaagg cggggtactt gccctggaac 360  
ggcgactttg ggctcaagac gctgtggtac gccgagttcg gcaacacang gcccggcgcc 420

aacacggccg ggcgcgtcag ctg

443

<210> 3594

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G2

<400> 3594

cccgggtcca cccacacgtc cgcccacgcg tccgcccacg cgtccgggtt cagatgccct 60  
gaggtcctct tccagccttc cttcattggt atggaagctc ctggcatcca tgagaccacc 120  
tacaactcca tcatgaagtg cgatgtcgac atcaggaagg acttgatgg taacattgtg 180  
ctcagtgggtg gcacgaccat gttccctggt attgcggacc gtatgagcaa ggagatcact 240  
gcccttgccg cgagcagcat gaaaatcaag gtggtggcac cgcctgagag gaaatacagt 300  
gtctggatag gaggatccat ccttgctcc ctgagcaact tccaacagat gtggatctca 360  
aaagctgagt atgacgagtc aggacctgcg attgttcac ggaagtgctt ctaagctctg 420  
gtccccctt cggc 434

<210> 3595

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G3

<400> 3595

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gcaaaggccg gacctccatc tcccacgagt ccgcctcttc cgacaacgcc gagtccgccg 120  
cgttcacctg gaactcggac aacgtcatcg tcttcggcgt cagcttcagg aacagcgccc 180  
gcgtcggcct ggtgaacgac ccggagatcc gttccgtggc ggcgatgggt gccggcgaca 240  
aggtggcctt ctaccactgc gcgttctaca gccccacca gacctgttc gacagcgccg 300  
gccgccacta ctacgagagc tgcgatatcc agggcaacat cgacttcac ttcggcagcg 360  
gtcagtctat cttccagtgc cccgagattc tcgtgatgcc tgaccggcgg acggagatcg 420  
gcagctccat catcgcgcat gtgc 444

<210> 3596  
 <211> 472  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G5

<400> 3596

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 tccgcccacg cgtccggata gcgagcaccg ggcgtcgggc gacggtggcg ccatgggtgg 120  
 ctgccactcc gccatcgagg ccaccaagct gaagattctg cgccgcggag gccggggtgc 180  
 cgctgccgtc ctccccgtca ccaaccacga cggcccgtgc tgctcctccg accacggcag 240  
 caaggagaag aagaagaaaa agaaggcgcg caggaaggcg aggaaacgcg cctccatcct 300  
 gggcgacgcc ggcaccttcg acccggactt ctgcggcgcg taccggctcg gcgcggagct 360  
 cgggcgcggc gagttcggcg tcacgaggcg gtgcgaggac gccgccacgg gggaggccct 420  
 ggcgtgcaag acgatccggc ggaagcggct gctcctgcgc ctgcgcgggc gc 472

<210> 3597  
 <211> 403  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G6

<400> 3597

ccacacgtcc ggtccactct cgtgtcggtc ccgcgatggg catgttcgca tcggccgcaa 60  
 agagatacag caacggcaag aattttctcc gcagcgcggg cgtgtgctgt tggtcgccgt 120  
 ccgcctccgc ccagcttggg ggtgtgcgcg gcaaggaaga gacatcgacg tcggcgccag 180  
 ctttcgcgcc ggatagcaac aagaaaagggt ggaggaagag gaggttcttg agaaagaaga 240  
 tgaaggccag gaaggagatc ggcgggctgg tggacctcgt caacgatatt tcggccaagt 300  
 cagaggagag cctaagggtt agcaacaaaa acatgcccgag cagggcgctg acgttcagtc 360  
 agctgagcgc cgcaacggac gggttcagtt cgcagaacct gct 403

<210> 3598  
 <211> 356  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G7

<400> 3598

ccacacgtcc gcccaagcct ccggtcgtcc ccctttcgcc cgcggcccca cccgccatgt 60

cactcgcgta cacgcgcata aagtatcgct ccagaaacac tatggcgcg cagtcacccg 120

tccgcctcag cgcagcgtcg ggctcatgcc gcatggcgcc acaagccgcy ggtgtccacc 180

actgctgtgg ccgcgctcga gtaccgacct cgcgacctga ctgggagatt cagggtcacgt 240

gcgatgacgc gaagatacgc gatgcgctcg atgctgcata tcatcaccgc aatttgcgcc 300

acttcaaagg agaacctacg ggttacgacg aagagcatgc cgagcagggg cctgac 356

<210> 3599

<211> 111

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G8

<400> 3599

tccggaagtc cgggtcgacc caaacgtccg gtcaagcctc cggtcggccc ccttacgggc 60

acggtcccat cggtaggtca cacgcgtaca cgcgcataaa gtttcgctcc a 111

<210> 3600

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G9

<400> 3600

ccacgcgtcc ggaaatgatg tccgagagtg aagagcatgg ctgctccta gacaagatca 60

acgacaagat caacgagaag atccatgagt ataagcactc gtcgtcgtcc tcctcctctt 120

cggactcaga cgatgacaag aagcccaaga agtctaagaa gaagaagctt tttggaagaa 180

aacatccatt gcatcatgtc ctccgaggag gcaaagccgc cgaccttgty ctgtggagga 240

acaaacaggc atctgggagc atcttggtag gggtgaccgt gatctgggta ctgttcgagg 300

gcatcgggta ccacctcctt accttccttt gccacgcact aattgtgttt ctcaccatct 360



ggttcatctg gtccaatgct gcgtcatttg tcaacaggtc acctccaaag ttcccagagg 420  
tcat 424

<210> 3601  
<211> 464  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-H1

<400> 3601

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ccgcctcgcc tcgtctccgc tctcttcttc ggacaaagcc ggggccgttc ggccggaggc 120  
aggggacgca cgggcaggca gccatgaacg gcatcaacct caacggcgagg ttctgtctgt 180  
acgggaacat ggagagctat gcgatgtggg tggcgaccgg cgtggcgctcg gccttcttcg 240  
cgctccctcga gcgctgctcc tgcattccacc tccacaccgc ggaggacgac ggcgacgagg 300  
aggaggagga cctcgaggag gcccgccgct ccttctcccg cccgatccct gactactact 360  
acgaccggtc cggtctctcc gcctccgtcg ccaagatgtg acctgaccga accgcgcctc 420  
tctccgcca agaaatgcgt ggtgatacca atcgtttctt gatc 464

<210> 3602  
<211> 425  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-H10

<400> 3602

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acgtcgtaag tacgatggac gcggaccagc aaggcgtggg tgcggcgagg gtgaagccgg 120  
cgctggccaa tgggacgccc tcggcgctgt tccggctccg caacgggagc ctgaacgcgg 180  
tgcgctccg ccgctgttcc gacctgttcg accgcaacgg ggacggcgag atcaccgtgg 240  
acgatctggc gcaggcgctg gatgcgctgg gcctggacgc cgaccgcgcc gggctgtccg 300  
ccaccgtcgg cgcttacgtg cccgacggcg ccgggggccc ccgcttcgag gacttcgaca 360  
agctccaccg cgcgctcggg gacgccttct tcggcgact gtgatgccag gacgacgcca 420

ccgcc

425

<210> 3603  
<211> 431  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-001-Q1-E1-H11  
  
<400> 3603

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ccaacacgag tatggcggtc atcagcaatg tcgcagtga tgcggcggcc gtggccgcgc 120  
tgctgctggt cgcaacgggt tcgcctgccg cgcgcgcggc ggcggtggcc gtggcgggag 180  
gggcgcgctc ggtgccggcg ggtccgctgg acatcgcgca gctgggcgcc atcggcgacg 240  
gcaagtcgga cagcaccccg atgacccca acgcgtggaa caacgcgtgc gaggcgacgg 300  
gggtacatca gatcgatc gcgccgggca actacctgac ggcggggctg gaactgaacg 360  
gcccctgcaa gtccctccatc agcatccgct tcgacggcaa cctgctcgga accggagacc 420  
tcagcgcgta c 431

<210> 3604  
<211> 444  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-001-Q1-E1-H12  
  
<400> 3604

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ctgatcattt ggggggagca ggatcaggtc ttcccaatgg agctggcgca taggttggag 120  
aggcatcttg gggagagttc tagattagta gtcgtaaaaa acgctgggca cgcggccaat 180  
ctagagaagt ccaaggaggt gtgcaagagc atcattgact attttcagga accgggttca 240  
agtgattgag ttggggggaa aggatgtgaa gccacaatgt gacggttgga aattctgagc 300  
taggacatcg tcctgtgatt ggcccgcagt tttgccgttt ccttggcaac ttgtaattgt 360  
aacaaaagaa cctttgtaat cacacggacc atacaagtct cctgtaaatt gtctgaaggc 420  
tttctgcgct caaagaaaca cact 444

<210> 3605  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-H2

<400> 3605

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 gccaaaaaca atcctgacaa ggtggccact ctaatactgg aaaatacatt tacatccata 120  
 ctggatatgg ctggtattat gcttcccttc ttaagatgg tcataggcgg gagctcttct 180  
 aaagggtcaa aacttttaaa ctgtgttggt cgctctccat ggaatacact tgatattggt 240  
 ggagagggtca aacaacccat tctcttcctt tctggattgc aagatgaact agtccccctt 300  
 ccacacatga agatgttata tgacaaagct tctgatcata acagaaattg cagatttggt 360  
 gattttccta gtggtatgca tatggatacc tggatgtctg gaggggaccg ctactggagg 420  
 acaatc 426

<210> 3606  
 <211> 412  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-G10

<400> 3606

ttccggggccg acccacgcgt ccgaatgagt taattttcaa cagctaacat ccggctgcca 60  
 aaaagtgaag tcgtactttt ggcgagacac attttttttt gaaaccaaga acaagaagct 120  
 aaacctgaaa ttccgtgtta gcagtaacct gatcaagtta cactacaact agcaatacag 180  
 atttttctca agccttggtc acatatatat tcaagtgcaa aaaggagatc gatacaacac 240  
 catcccggt cttacaactg gcaggccggc caacgcgcac gcggctagtg cccgtgcttg 300  
 tgcgcgtgct ccggctgggt gacgacgacg aagatgttga gaacgttgtc gacgaggcgg 360  
 tatacgttcc gctgcatggg caagaagggg gacctaatacg ccgggaagtc ag 412

<210> 3607  
 <211> 442  
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-006-Q1-E1-G11

<400> 3607

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aacagggtctg aagagaagcg ctcgacgtgg tgcagggtctg tcatattctg tgggtgtagtt 120

caagcataag ccattacagg gaggtcgtc ttcaggatgc aagccttttc attatgatga 180

aggcatacga gatgaagggtg taatctaagg atgacatgaa taaacgccga agctaccgcc 240

agatcgatag cttcgggtca tgatgaagat gaagtatgat ggtgatgctg accgaagggg 300

aaaaaagact atttagtcct taataatttg tattttgatc ataagtaaatt attggggata 360

taaatgtact ttacctgng cttggggtgc gtcncgtgcc tataaatagg tgaacggtag 420

caacatactg ttcacactga tt 442

<210> 3608

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-G12

<400> 3608

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tcttcattag cacgctaact tgtaatctgc aggatctaag caaagacttg atttagttat 120

ggacggattg gtaggcctct tgaaagttcg cgtgggtccg ggtatcaacc ttgcctaccg 180

cgacgcaaga ggcagcgatc caaactgaag acaagcgtga agaagagatc cgtgaacccc 240

atatggcaag aggagctaac tctgaccgtc acagatccca gccaaacct gaagctggag 300

gtgttcgaca aggacacctt cagcagagac gaccccatgg gagacgcgga ggtggacgtg 360

gcgccactga tggaggcggt gagcatgaac ccgcgggagg agagtctgag gaacggcgcc 420

a 421

<210> 3609

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-G5

<400> 3609

ccacgcgtcc agccatttct gaaaaccttg gcacgacact ggtttgtttt gggtcagcca 60  
cacgtttcag ttgtcgtgtt ccctactttg ttccgggagt attgagagct tgtgttctgt 120  
tcacgattga ttcagggtgtt ttcttttgtt ttgctgtgtt ttttttcttc ttctttttat 180  
cgctgagccg atatatatgc actggttctc ctctgaatat ggggtgcctt caccaggact 240  
caatatgtgt aattcttttc tgtttcctgg tcatgattgt ctgtaaattg taaacattgg 300  
gtttgatgga tatcgacact ggagtgtaaa gtgttggcgg ttaaatacac ggccctcttt 360  
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<210> 3610

<211> 443

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-G6

<400> 3610

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gcggtcctcc caaagtcccc ccaggcaaga acatcacggc cacctatggc aaggactggc 180  
tggacgctaa agcgacatgg tatggcaagc cgacgggtgc cgggtcccgac gataacggtg 240  
gcggctgcgg gtacaaggac gtgaacaagc ccccttcaa tagcatgggc gcatgcggca 300  
acatccccat cttcaaggat ggtctgggtt gtgggtcctg cttcgagatc aagtgcgata 360  
agcctgtgga gtgctccggc aagcccgtgg tgggtcacat cacggacatg aactatgagc 420  
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<210> 3611

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-G7

<400> 3611

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cgccccctct cccgatccgcc ggcccgcga gagctagctg ctgatcggtc gaggagagtc 180  
atggcgacgt cgacgatgcg cgttgccgcc ggcggtgctgc tggtcgtgtc ggcgctggcg 240  
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aggctccctgc tgggagtgcc ccagaaggtc atcctcatca acggcgagtt ccttggcccc 360  
aggatcaact gctcctccaa caacaacatc gtcgtcaacg tcttcaacca gctcgaccat 420  
ccgctcctt 429

<210> 3612  
<211> 441  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-006-Q1-E1-G8  
<400> 3612

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gtagaacgta catgaccccc gcgtcgtcag ggaagtatat ggattattac aggggggcttc 180  
ggcttcggca taaaggctct ctcttatggc aaagacatac aatgtgaaga tgtaaccgca 240  
agggtgataag aatggtcacc gaagggtgtag ccgaaagagc ttcggcttaa tatgatgacg 300  
aagaccaa atgatgctga ccgaaagggg gaagaagact atttagtcct taatgattca 360  
tgttatgata ataaatagat gtcagggaca taaatgtact tttacccggg ttgcatctcg 420  
tgtctataaa tagatgaaca g 441

<210> 3613  
<211> 208  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-006-Q1-E1-G9  
<400> 3613

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 accacattgg gcacctccgg aaatagcaag acagagagca ctaaagctgt gcaagaggca 180  
 tgggcatcag cgtacggctg aactggga 208

<210> 3614  
 <211> 428  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-006-Q1-E1-H11  
 <400> 3614

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 ttctgttcaa agctgatgca ccacaccggc aacgagctct tgcagcggac gcaataacct 180  
 gccggaaatt cgccgagcgg gcttacaagt acagaccact caaagttgtt gagtttgatc 240  
 ggccctacc acagtgcata gcatacttgg atctcaagcg cgacgagtgc tctcgactct 300  
 ttctgcagg gcggatatac tcgcaagcct tccaccttgc agggcagggt ttcttcctct 360  
 cagctcactg taacatggag cagcaaagcg cgttctactg ctcgggctc ttcctgngga 420  
 tgcaagag 428

<210> 3615  
 <211> 405  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-006-Q1-E1-H2  
 <400> 3615

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 tcggccgtcg cgctgctctg cctgtaccac ctcttttcc tctccctgtc cgtcccggac 180  
 ccggcagcag cagcagcagc cgtccccgc cgcgccggtg gccaccgtgg cagcaacgtt 240  
 ccgtccgggt caggaaccgc caacgtcgtc ctccgcttcg gcctgtccgg gcagccgctc 300

cgctccaag acccgccgc cgccgccgc ctcccgaca tcgacacctt ccgcggcaag 360  
ctcgagcggc tgctttcttc ccgacgacca cgaaccggg ctggt 405

<210> 3616  
<211> 361  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-006-Q1-E1-H5  
  
<400> 3616

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ggcgtgggtcc atcaaccagt gcaggtcctt ccgctggaac ctgacggcga gcgcggcgcg 120  
gccccacccg caggggtcgt accactacgg ccagatcaac atcaccgca ccatcaagct 180  
cgccatgggc cgcggaagg tggacggcaa ggagcgggtc ggcttcaacg gcgtgtcgca 240  
cgtcgacccc gagaccccg tcaagctcgc cgagtacttc aacaccaccg acggggtggt 300  
ccagtacgac atcatcggcg acgttcggcc cttcaagttc ggcccaaca agattggccc 360  
c 361

<210> 3617  
<211> 421  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-006-Q1-E1-H7  
  
<400> 3617

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aaagatgaag aaagtggcat catcgtcagc cgttctcttc gtgctagccc tgacgctagt 120  
ttgtgccccg ctgatagcag aggcaaagaa gaagagagtc gccgccgccc ccgccgagga 180  
gaagaagggtg caggacaact tctgctcgac gctgtgcgag ggcaggaagg ggatggacct 240  
ggtggtgtgc aaggagtcct gcgacctctc acagcgctcc aacctggtgc tgtacggccg 300  
gattcagtgc aatggcaagt gcnacgagca gaagggcatc acggcgccgc atatgaaggt 360  
gtgccaagag gcgtgcgaca aggactacgt ggtcaatgcg gctgaggtca ccaaggcctg 420  
c 421



<210> 3618  
 <211> 406  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-006-Q1-E1-H9

<400> 3618

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aaagatgttc caggggtggaa ggttggcgag agtgtgtaca attccgggaa atggatgccc  120
ccggctaccg gtgagctccg ccctgaggtg tggtaagggc ctgtttagg cattgagaat  180
gcaatcatgt catgagggca tgaataaggc tttcagacat gggcatcctt ctttgttcac  240
taaggatcag ctgttcanat acctgtatct attttgctct tatgaaatct ggctgggttaa  300
taatatgaag ccgacgcttt gcctcatcta tgctcgtgca ttgatgtaac gtgtccttgt  360
ctgatattaa gaaaatatgg aatataagaa agaaaaaac gcctgc                      406
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<210> 3619  
 <211> 435  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-A1

<400> 3619

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gcggcgccca tcgaccccaa gtacaagaag acgatcagcg acgcgtgcga cggcaaggac  180
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ctggtgctgg agaagaagat ccgctcacca tcgaccgcct gatgggggatg gacaagaaga  300
cggagcccat agtgaaggcc atgtcggaca agaccaccga cttcgtcccg atcttcgcca  360
aggccatgga gaagctcagc gtgctcaagg tgctcacggg gaacggaagg cgagatcagg  420
aagacgtgct ccgag                                          435
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<210> 3620

<211> 376  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-007-Q1-E1-A12  
  
 <400> 3620  
  
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 ggggtcgccgt gctagcgggtg gccgcggatg tcgccaacgc cggccacgcc aagcccctga 120  
 cgcctggcgg gcgcgtggta caccacaacc acggcaagtt cacggccggg ccgtggaaac 180  
 ccgcccacgc gaccttctac ggcggggcggg acgggtccgg caccacggcg ggcgcgtgcg 240  
 ggtacaagga cacgcgcgcg caggggtatg gcgtgcagac ggtggccgtg agcacgggtgc 300  
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<210> 3621  
 <211> 442  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-007-Q1-E1-A4  
  
 <400> 3621  
  
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 cctcctggtc ctcttctgca tcgtgcatgg tgagaaggaa gagtcaaagg gcatcgatgc 120  
 gaaagcgtcc gggcctgggt ggtccttcga catcaccaag ttgggcgcct ccggcaatgg 180  
 caagacagac agcacgaagg ctgtgcagga ggcattggca tcggcgtgcg gcggcactgg 240  
 gaagcagaca atcctcatat ccaagggcga cttccttgtc ggacaactca actttacagg 300  
 cccttgcaag ggcgacgtga ccatccaagt ggatggcaat ctgctggcga ccacggacct 360  
 aagccagtac aaggaccatg gtaattggat cgagattcta cgcgtggata acctgggcac 420  
 caccggcaag ggaaaccttg ac 442

<210> 3622  
 <211> 412  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-A7

<400> 3622

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accacatccg gccagcccaa cgaaaatgtc ggcggccaca gctgcgggtcc tcttctacat 120  
cctcgcgcgtc gctgccctca gcgcggccga ggcaccggca gagtcaccga aggcaggcag 180  
tcctgccaaag gcaccggccg agtcaccgaa ggcaggcagt cctgcagctc ctgccaaggc 240  
acccgagtct gctgccacga gaactgcccc cgctaaggca cctcaagccg cctccacccc 300  
cgccgttgcc gctgccccat cgtcgtcgtc gtctaggaag tctgggtccag ctgccgcgcc 360  
gaccaccgcc gcctctacac cgtcttcttc caaggacgag gatttgagcc ct 412

<210> 3623

<211> 466

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-A9

<400> 3623

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gcaccggtgt cgcttgccgc gcgcgcggcg gcggtggcgg tggcgggagg ggcgcggtcc 180  
gtgccggcgg gtccgctgga catcgcgcag ctggggcgcca aaggcgacgg caagtcggac 240  
agcaccgccga tgatcctcaa ggcgtgcgaa gacgcgtgcg acgcgacggg ggtacacaat 300  
atcgtcatcc cgccgggcaa ctacctgacg ggcgggctgg agctgaaggg cccctgcaag 360  
tcctccatca tcatccgtct ccacggcaac ctgctcggca ccggcgacct cagcgcgtac 420  
caaacgaact ggatcgagat cgacatcgtc cagatcctgt ccatca 466

<210> 3624

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-B11

<400> 3624

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 tcgtctccac tgcgtccgct gcacggaccg tgggcgacac cgtgcaggac gcgtgcagca 180  
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 cgaccccgcg ccggctggcg gagctgttcg tgaacatcgc ggccgagaag ggatccggga 300  
 tggccacgtt cgtgcacggg aagtacaaca acgccaagga cagcaccgtg ttcaagtgtc 360  
 acgacagctg ctcggaagac gtcgaggagg ccgtcgccca cctcaacggc ctcgctccggg 420  
 agcccaccga cgccaa 436

<210> 3625  
 <211> 435  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-007-Q1-E1-B12  
 <400> 3625

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 ctgtctctcc tcgtcgtcgc cgtcgtcctc tccaacgtcc cctctctggg cgccctggcc 180  
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 gagaaggagc aggagatgga gaaggcggtc gggcgaggaga aggctgcccc gcaagagctg 360  
 ctcaagtacg ccaaggagaa aggcacgtg tcaccgacca acggcacggg gtggtacaag 420  
 ggcatcgccc gggag 435

<210> 3626  
 <211> 448  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-007-Q1-E1-B2  
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tcgtctctct caccgcgcgc gcgttcggct cgacgtctct ccccgccgca gccggcgccc 120  
 ccggccccgc gggcaccagc gtcccgggtcc cgggtcccgt cccgggtcag ccgagcgcggt 180  
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 tcgaggtgga cggcgggtac cgcctcacgt accgccgag ggtccacggc aacgtcgcg 360  
 gcggcagcat ccggaacctc ggccgggtct ccgtcaggat gtctctcttc gactggagca 420  
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<210> 3627

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-B5

<400> 3627

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 tgaaggcggc ggccgtggcc gcgtgctgc tggtcgcagc ggtgtgcct gccgcgcgcg 180  
 cggcggcggt ggcggtggcg ggagggggcg cgtcgggtgcc ggcgggtccg ctggacatcg 240  
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 ggaagaacgc gtgcgaggcg acgggggtac agaagatcgt catcccgccc gggcaactac 360  
 ctgacgggcg ggctggagct gaagggcccc tgcaagtcgt ccatcatcat ccgtctcgac 420  
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<210> 3628

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-B6

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ctccgcccac cagaaagaca tccacgtcct cggcagcgtc gacggctcca gcgacggcag 180  
cagccccgag tccgaaggcc gcgctcgtcta cgcggacatg aagctggctg atacggaatc 240  
cgatgcgccc ggcggggcgc cggcgccggg gccgtcgtcc ggttgaactg agaagcgtgc 300  
gtccagccaa gcaagggtgt caaaaccgag aactaattaa gggctcgatc gtgtgtcagg 360  
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<210> 3629  
<211> 452  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-B7

<400> 3629

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tcatggaccc gctcaggetg tcgtaccagg cgcggatgca cgcgtcgcag aacaagcggc 180  
tgccgctgca ggccgtgctc agcgtgctct actacgacca gctgaagatc cgtagcgcgg 240  
acggcagcgg cggcacggag gaagggtggg agacacagtc ggccgcccggg aaggcccgtg 300  
cgcaggcgcg ggccggacgtg tccctggcaa gggagaacga ggcgctgccg ttggagctgg 360  
cgcggatgcg agcgtacgtg tcagggatgc agcagagcag caaggggagc ggggtccaggc 420  
catcgtcgtc atcgtggta ccaggcccag cg 452

<210> 3630  
<211> 465  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-B8

<400> 3630

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tgacctgaag gagcatgtca tcaagcctgt catccctgag cagtaccttg acgagaagac 180  
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cctcactggc cgcaagatca tcattgacac ctacgggtggc tggggagccc atggtggtgg 300  
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 ggctgccaag agcatcgctc ccagcggcct tgctcgccgc gccatcgctc aggtgtctta 420  
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<210> 3631  
 <211> 261  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-007-Q1-E1-C1  
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 aggtccctgt gtgggctttg tgagagcgcg cggcatgttc tgcattttgt cacaaccatt 180  
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<210> 3632  
 <211> 394  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-007-Q1-E1-C10  
 <400> 3632

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 gttcaagagg gagctggagg gcatccagct ggagctgcag gccaccgacc ccagcgagat 180  
 gagcatggac attgtcaggg cgcgagctct ctgaagagga agacgcgcat ccgctcgcg 240  
 gatcgccatg catgccccgg aacgacagaa gctgtttgtc ttgcatcgac cggcggcctc 300  
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 aactactcta gacagtggcc ggtgagtaca gctg 394

<210> 3633

<211> 424  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
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 <400> 3633

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accgcattcc ccgagttcaa gcccgaggag atggctgcca tcatgaagga ttctgacgag  180
ccggggcacc tcgccccgac cggcctgata ctgggaggca ccaagtacat ggtcatccaa  240
ggcgaacctg gagctgtcat ccgtggcaag aagggatccg ggggcatcac tgtgaagaaa  300
acagggcagt cactcatcat tggcatctac gacgagccga tgactcccgg gcagtgcaac  360
ctgntggtgg gaaggctggg cgactacctg ctccaacaag gggatgttat gacaaccct   420
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<210> 3634  
 <211> 401  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-007-Q1-E1-C2  
  
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ctagtccaga atccagatcc agcggccgca tctctctctc tcgcgcgcgc gcgcgagcgc  180
gatgagctgc cgcgacgggc gatcgtgcta gcgtaacag cgagcggtgc gcgagggcgg  240
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<210> 3635  
 <211> 431  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB148-007-Q1-E1-C5

<400> 3635

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agctccctcc ctcccagcca tggcgacgcc ggacaacaag gggcacgggc atccgctgcc 180  
caagtttggg gagtgggacg tgaagaatcc ggccacgtcc gagggcttca ccgtcatatt 240  
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aggcattccg ccggccttca ggaacggcgg cggcgacggc gggtagaggc ccgacttcgg 360  
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<210> 3636

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-C6

<400> 3636

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gggcccgcag aagtgctcgg ggcgggtggg cgagtgcgac gtggacgagg cggaggagct 180  
cgggctgagc ggcggcgggc tcggctccga cgacgcggtg cggcggacgc tggcgacgcg 240  
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caagcgcggc cggtcctact acagcaactg cgaggcgcag aaggccgcca acccctaccg 360  
ccgcggctgc tccgccatca cgcgctgcgc ccgcaacatg aactgagccc agcgtagct 420  
gctgccgggg cgc 433

<210> 3637

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-C7

<400> 3637

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ggccccttgg aaaagaacaa caacggcaag ttcacggccg ggccgtggaa acccgccac 180

gcaaccttct acggcgggcg tgacgggtcc ggcaccacg cgggcgctg cgggtacaag 240

gacacgcgca cgcaggggta cggcgtgcag acggtgccg tgagcactgt gctgttcggg 300

gacggcgcg cctgcggagg gtgctacgac gtgcggtgcg tggacagccc taccgggtgc 360

aagcccgacg cggcagcgct ggtggtgacc gtgaccgacc tgtgcccgcc caa 413

<210> 3638

<211> 408

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-C8

<400> 3638

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tgcgtagat taataccatg ggagtgatat acagatgggt ctaccaatca tggttggagg 180

ttacacagac ttcttttgtt ctatgctcca tacaaggaat tgtggattca tcttccgagg 240

gtcgtagact ccgatcaatc caaattgata tgtgttttct tggatcaatca tggttggatt 300

catcttccga ggatctagac tccactaaga ctgtcctttg acaagctgga cgggtgtgac 360

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<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-C9

<400> 3639

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ccctctggcc tegetgctcc tcccccttc ctccccccac atgcgctgcc cccgcccggc 180  
cctgccttgc cctgctgcgc ccaagctgaa tctccgcaca gacaattaga gtagctgcat 240  
tggcggggaa agcgcaagaa gctcagcaga aatggcggag caggcaggcg ccggaaggta 300  
ctggtgccac atgtgcgccg cggctcgtgag ccccgcgag ggcgaggcgg aggtgaagtg 360  
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cgatgacggc ga 432

<210> 3640  
<211> 455  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-007-Q1-E1-D1  
<400> 3640

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ccggcgggagc ggccgttcgc tgcgcagggc cggcgccggc ctgctgtct tctagcagga 180  
agcagcagca gcagcccgac gacgccggct gcggcagcag cgacgaccac taccagcacg 240  
acgtgattat gctgaggcgg acgaagagcg ggcgggcgtt cccgcccgcg atctccgtga 300  
tcggcaaggg cgggcggggc tggctctgcc tgcgggcgca ccgcgagggt ggacgcctcg 360  
tgctgcggca gatgcgctg ccgtcgcagg agctgctgca gccctgcaag gaggacggca 420  
ggttcaagct cctcatgcac ccggaggccc gcgcg 455

<210> 3641  
<211> 402  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-007-Q1-E1-D10  
<400> 3641

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agtcttcagc tcctggtgaa gtgatcccta catgcaatgg aaggcattgt ggagacacat 180

ggacacttcg cgacaaaaac aagcctatgc tttggactga gaattggact caacaattca 240  
gagcatatgg cgatcaagta gctatgcgtt cagctgagga cattgcatat gctgtgttac 300  
gattttttgc aaagggtggg tcattgggta actactacat gtaccacgga ggaacaaatt 360  
ttggaaggac tggcgcttct tatgtgctga ctggatacta tg 402

<210> 3642  
<211> 430  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-D5

<400> 3642

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ctcctcctcg tcgtggccgc cctctcggcg cgcgcccgcg cgcagcaggt gccgccggtg 180  
ggcggcagcg ctctgaagcc ggactactac agccagtcgt gcccgccgcg ggagcggatc 240  
atcgcggagg tgatgcagac gaagcagatg gcgaaccgca cgacggccgc gggcatgctg 300  
cgcgtcttct tccacgactg cttcgtcacc gggtcgcagc cgtcgggtgct gatcgcgtcc 360  
accagttcc agaagtcgga gcacgacgcg gagatcaacc actcgtctcc cggggacgcc 420  
ttcgacgccg 430

<210> 3643  
<211> 459  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-D6

<400> 3643

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tgtcgtcggc gggtcgtgcg ggccccgaa ggtgccgccc ggcccaca tcaccaccaa 180  
ctacaacggc aagtgggtca ccgccagggc cacctgggtac ggtcagccca acggtgccg 240  
cgctcctgac aacggcggtg cgtgcgggat caagaacgtg aacctgccac cctacagcg 300

catgacggcg tgcggcaacg tccccatctt caaggacggc aagggtctgtg gctcatgcta 360  
cgaggtgaga tgcaaggaaa aacctgagtg ctcgggcaat ccagtcacgg tgttcacac 420  
agacatgaac tacgagccta tcgctcgcta acatttga 459

<210> 3644

<211> 439

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-D8

<400> 3644

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tccttggtgc ggccggcc gccgcgaacg cggccggcgg ggcgttcagc aactgggtgg 180  
cgatgaacca gcagagctac gcgctgtacg cgcagaagtc cgtcggggac gggggcaagg 240  
agccccctgga caagaagctg tcggaggcgg agaagaagaa ggacacgtac gtgggtggacc 300  
ccagcggcaa gggcgactac accaacaatc cgcggcgct ggaggatata ccggtgagca 360  
acaccaagcg cgtgatcctg gatctcaagc ccggcgctca gttccgcgag aagctgttcc 420  
tgaacatcag caagccgtt 439

<210> 3645

<211> 442

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-D9

<400> 3645

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caataaacta actacgaatc ggggtaccagc tcggaatagc ccagggaatc ctgtacttag 180  
gcattcacgg agcttgctg aaactggccg aggagcaata cagaaggtct catcaattac 240  
agagaaacta tcccaaagt ctgtgacctc tagaacacgg agcgctgtga agcctgctgc 300  
cccatgatg aaggccggac atggcaagtc ggactttctt ggggaagtctg acgatatccc 360

tccagcaaag aggctgacaa gaaaattggg cagctaaatg aggggtatgtg gaggtaaaat 420  
tcgattagct gcaggaaggg tg 442

<210> 3646  
<211> 209  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-E1

<400> 3646

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaacgaaaaa gaaaataaaa 120  
aaaaaaggaa gaaaaacaaa aaagctacaa aaatcaaata aaaaaaaaaa aggggggggcc 180  
gcccaaaagg ttcaaacctt aattaccct 209

<210> 3647  
<211> 420  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-E12

<400> 3647

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ctcctccacc ccggaggcca ttagcctgct ctgcactgcc aagggtccat gcaccggcgt 180  
caccatggat gacgtcaacg tcgagtatag tggcaccaac aacaagacca tggctatatg 240  
cacgaacgcc aagggcagca ccaagggttg cctcaaggag cttgcatgct tctagaccct 300  
cagtcgactg acccatctct ctagttataa tttttctctc gtcccttgaat tgtccattag 360  
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<210> 3648  
<211> 457  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-E5

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cctgacgcct ggcgggcgcg tggtagacga caaccacggc aagttcacgg ccggggccgtg 180

gaaaccagcc cacgcgacct tctacggcgg gcgggacggg tccggcacca cggcggggcg 240

gtgcgggtac aaggacacgc gcgcgcagg gtacggcggtg cagacgggtg ccgtgagcac 300

gggtgttgttt ggcgacggcg cggcctgcgg cgggtgctac gaggtgcggg gcgtggacag 360

ccccagcggg tgcaagcccg acgcggcgcc gctggtggtg acggcgaccg acctgtgccc 420

accaaggac aagtgggtgca agccgccgca ggagcac 457

<210> 3649

<211> 435

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-007-Q1-E1-E6

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cttcatcatg atcaagcccg acggcggtcca gcggggcctg atcggggaca tcatcagtcg 180

cttcgagagg aaagggttct accgcaaggg gatgaagtgc atgaacgtgt agaggtcctt 240

cgcgaggag cactacgcgg gggggggcgg caacgcgtgg gttggcnngt gtggtngagc 300

gggtgattgc cggccccgtg ggggctgggg tgtgggaggg gaaggacgtc gtgttgactg 360

gccgcaggat cattggggcc accaggcctt gggaggcagc ccccggtacc attcgtgggg 420

actacgccgt ggaag 435

<210> 3650

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-E7

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gacgtcgtgc cccgacgccg agaagatcat ctccgacgtc gtccagaagc ggttcaaagc 180

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ctgcgacgcg tccatcctga tcgaccgat gtcgaaccag gcctccgaga aggaggccgg 300

ccccaacgtc tccgtgaagg gctacgacgt gatcgaggag atcaagacgg agctggagaa 360

gaagtgcccg aacgtggtgt cgtgcgcgga catcatctcg gtgagcgccc gcgactcggg 420

gaagctgacg ggc 433

<210> 3651

<211> 299

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-E8

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cacacattag atctaggcgt ataaccatc gggccgtcga tcattgaatc gatggctgcg 180

atctcgttct ggttcgggtg taagaaaatt taatcgtggc cettgttgca ggatccaact 240

gctagactta accgataccc tttcgaagac atccatccca gggcgccgcg tctagagga 299

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<211> 202

<212> DNA

<213> Zea mays

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<400> 3652

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agtctatctc cagcataagg aatgattatg ctgcacgatg actggccggg gtaaggagta 120

ggcgtctgtt tgcccttact agcagggttt ccaggggggtg cttcctatag ctctccactt 180



gcgtgagcgg cgacatggat tt

202

<210> 3653

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F11

<400> 3653

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tataggctat gactatgaga agtgcattgg cctaaaggta aaaccaagga agggtgacgg 180

actcttgttt tactccctta tggtaaattg gaccattgac cggacttcac ttcattgtag 240

ctgccccgtc atcaaaggcg agaaatgggt cgccaccaaa tggatcagag acaatatagt 300

gtagaaatcg aaaggctcag gtgtcatgtg ccctccaaaa aaatagatca tgcgcacata 360

tactgaccat atacttcagt gtttgttcaa ttgccatgga cagttggacc aacggaagga 420

aagtgttaacc aatct 435

<210> 3654

<211> 452

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C5

<400> 3654

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ctacaaccag atggggcgacg tgccccccgc cgtgaacggg cccctccatg tcatcccca 180

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gtggtcgccg gaggtgagga agacgtacaa cctgctggac acgggtgagcc ggcacacgat 360

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<210> 3655  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C6

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ctaatcctta cggggaatca acaacatgca gcacatcatc tatcgcccta ataggttctg   420
gcacagtcac cttattccca actgttgtgt taccat                               456
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<210> 3656  
 <211> 453  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C8

<400> 3656

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ccagcccctc gtctgcgaca acggaactgg catggtcaag gctgggttcg cgggcgacga   180
cgctccgagg gccgtcttcc ccagcatcgt tgggcgcccg cgccacaccg gtgtgatgg   240
ggggatgggg cagaaggatg cctacgtcgg cgacgaggcg cagtccaaga ggggtatcct   300
gacctcaag taccocatcg agcacggaat cgtcagcaac tgggacgaca tggagaagat   360
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<210> 3657

<211> 422  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q2-E1-D10  
  
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 ccaagacgga ccacgggtac cccgcgggca tcggcgtgcg caactcgctg ttctctctcg 360  
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 cc 422

<210> 3658  
 <211> 353  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q2-E1-D11  
  
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<210> 3659  
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 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q2-E1-D12

<400> 3659

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caagtgatgg agatggattt cgacgtcggc atttactgta gctgcatcgc cgtcgtcctc 240

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<211> 464

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-D2

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agcacgtcgc gaggtcggcc cgcaccatcc cgccgcagca gacgcaggcg ctcaagttct 240

gcgacaccat gtacatgaac acgcaggaca ccatcggcgc ggcgcagcgg gccatcacgt 300

tcaaggacac cggcaccgcc aagatcatgc tgcagctcgc cgtccaggac ttcgactcgt 360

gcgaccgccc cttcaccag gccggcgctc ccaaaccat ggggaagttt gacaaggagc 420

tcaaccagat ggccaacaac tgcattggctc ttgcaaacat gata 464

<210> 3661

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-D3

<400> 3661

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tctactagtc ccggcggtgt gcatctcgcg gcacgacaag tccgagagca aggctgacga 180  
 agaagctgct gctactaccg ttgccgccga cgagcatggc tctgtcaaga ccatgtccct 240  
 cgacgcatac gggccactgg agatggccgc caagaagccc aaggagcagg tcctgaacgc 300  
 gcaagctacg cgggcgacga ccgctggcgc tgacacatat gaccagaaac ccgttggtga 360  
 aaaacaggct gaaacggcca cggcctccgc tgccgatgaa caaccgaca aata 414

<210> 3662  
 <211> 452  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-066-Q2-E1-D4

<400> 3662

cccacgcgtc cgcggacgcg tgggcgcgag cgcagaaggc acacacgtac agccatggcg 60  
 aactcgtcgt cgggcctggc ggtgagcgac gagtgcagg tgaagttccg ggatctgaag 120  
 gcgcggcgga gttccgggtt catcgtgttc aggatcgacg acaaggacat ggagatcaag 180  
 gtggaccgcc tcggcgagcc gaaccagggc tacggcgact tcaccgacag cctccccgcc 240  
 gacgagtgcc gctacgccat ctacgacctc gacttcacca ccgtcgagaa ctgccagaag 300  
 agcaagatct tcttttcccc ctggtccctt gatactgcac gcacccggag caagatgctg 360  
 tacgccagct ccaaggacag gttcaggang gagctggacg gcatccagtg cgagatccag 420  
 gccaccgacc ccagcgagat gagcctcgac at 452

<210> 3663  
 <211> 467  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-066-Q2-E1-D6

<400> 3663

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 taaggaaagg tcccgcctt ttctccgac atccacaggg gggaggggaa aacacgtgca 120  
 ttcacccggc ggcaataatg gcctcgggtc cggtccggc gacgacgacc gccgccgtaa 180

tcctatgcct atgcgtcgtc ctctcctgtg ccgcggctga cgaccccaac ctccccgact 240  
acgtcatcca gggccgcgtg tactgcgaca cctgccgcgc cgggttcgtg accaacgtca 300  
ccgagtacat cgcgggccc aaggtgaggc tggagtgcag gcacttcggc accggcaagc 360  
tcgagcgcgc catcgacggg gtcaccgacg cgaccggcac ctacacgac gagctcaagg 420  
acagccacga ggaggacatc tgccangtgg tgctggtggc cagcccg 467

<210> 3664  
<211> 467  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-D8

<400> 3664

gtcgaccac gcaaccgacg aaacaaaaga agctattttg acaccacaca cacacacaca 60  
gaggagagaa gataagagaa cgaggggcag ggcagccagc gccgctagct gaagcaaggc 120  
agggcaagag aatccgtacg tcgaggactt cgacaagctc caccgcgcgc tcgggggacgc 180  
cttcttcggc gcactgggag gccaggacga cgccaccgcc gcggcggacg gcgcgggcgc 240  
cggcgccggc gccgaggagg acgagcagga gatgcgggag gcgttcaagg tcttcgacgt 300  
cgatggcgac ggcttcatct ccgcgcgtga gctgcaggag gtgctcaaga agctcggcct 360  
ccccgagggc agcagcatgg ccaacgtccg ggagatgac tgcaacgtcg accgcgacag 420  
cgacggccgc gtcgacttca acgagttcaa gtgcatgatg cagggga 467

<210> 3665  
<211> 413  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-E1

<400> 3665

gggtcgacc acgcgtccgc gacggcgtgg acctggcgca caacgtgacg gtgccaggt 60  
tgacggtgga gatggccggt ggcgcgaggc tagagccgga agccaagagc gtggtgatgc 120  
cggaggtagt gcccggggtg gcgtgcctgg ctttaggaa gctgccgcgg ggagggcccg 180  
ggatcttggg caacgtgctc atgcaggagt acatctggga gatcgaccac ggaaagggga 240

agatgagggtt caggaaggac aagtgcaaca cccatcatct ccacaacagc aaaggcggag 300  
 aggtctataa taataataat ggcaattcct cctctactgt cgtgcatcgc gtcaattaat 360  
 tcgttctctc ttctctatct ccacaaaatt taaggaccag accatgcatg cac 413

<210> 3666

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-E10

<400> 3666

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 tgatgccaca gctgcgtagc ctcgtcgcgc tggctcctgt ggccacggcc atagccgccg 120  
 ctcccggcgt tgggtttgtc gtcaccggcc gcctctactg cgacaactgc cgcgccgggt 180  
 tcgagacaaa cgtgtccac gccatccaag gcgcgacggt ggagatggag tgccgccact 240  
 tcgagtcgca gcaggtccac gacaaggcgg aggcgacgac gggccccggc ggctggtaca 300  
 ggatggagat cagcggcgac caccaggacg agatctgcga cgtgcgcctg ctcaagagcc 360  
 ccgaggcgga ctgcgccgag atcgaccact cccgcgaccg ctgccgcgtc ccgtcaccc 420  
 gcaacg 426

<210> 3667

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-E12

<400> 3667

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 gcaacttgga gaagaacaag ggggcccaagg ggagccagct cgagaccaac aagaaggcca 120  
 tgagcatcca gtgcaaagtg tgcatgcaaa cattcatgtg taccacgact gaagtgaagt 180  
 gccgggagca cgcggaggcc aagcatccca agacagacgt gtaccagtgc tcccccatc 240  
 tgaagaagtg aaaggcctga acttagcaac cagtgtgtgt ttggctacta cgatcgggcc 300  
 agggggcggt ccttgtgttg aggggtgttca ttccgtgtta ttttcccgtc agtcatgcgt 360

cctgtcctat gttaacctac ataagaaagt gatgtggtgt ccacttctag tgaaactact 420  
gtctgccgtt t 431

<210> 3668  
<211> 430  
<212> DNA  
<213> Zea mays  
  
<223> unsure at all n locations  
<223> Clone ID: LIB148-066-Q2-E1-E5  
  
<400> 3668

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cttgccacgg caaaacacct tcgccggcga gagcatggcg atggcgtacc gtgtcctgga 120  
ggtcaccctg gtgtcggcaa atgacctcaa gaaagtgtcg ctcttctccc ggactcgcac 180  
ctacgccgtg gcttccatct ccggattcga cctccgcac ccttcccaca gcacccaagc 240  
agaccacagc aacggctgca acccctgctg gaacgccgtg gtacacttcc ccaccccggc 300  
tgccgctgac acccgcggcc tcgcactcca cgtgaggctc cgcgcccagc gtctatacct 360  
ggcgatcgc gacatcggcg aggtgtntgt gnccatcgac gacctcctgg ccggcgccga 420  
caagggtggc 430

<210> 3669  
<211> 330  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-066-Q2-E1-E7  
  
<400> 3669

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tcgtgattgg ttctgtcacc acccgtctca cttcgaggc cggcaaaggc tccaagcctg 120  
gccacctggt cctcaccccc aacattgcc ccatctccga agtggagatc aaggagcacg 180  
gtggcgatga cttctccttt gagctcaagg agggcccggc cggcacctgg acgcttgaca 240  
ccaaggcccc gctcaagtac cccctctgca tccgctttgc cgtcaagtct ggcggctacc 300  
gcatcgccga tgacgtcatc cctgaaaatt 330



<210> 3670  
 <211> 402  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q2-E1-E9  
  
 <400> 3670  
  
 gggtcgagca cgcgtccacg agcacgagct cagggccgtc tctgtcggcc accaagtcct 60  
 cgcccaacct ctgcggcacg cccagcccag gtagccctgg tgcgcactct agtaacgcct 120  
 tggagtcatt gaagatttgc aaccaggag ataaccctct gcttgtgaag acaaggctca 180  
 ggcactgggc tcaagtagtg gcttgttcag tgaagcactc gagctgatcc tcgtcagtgt 240  
 tttattcacg ctcttcttcc atacataata cccgtacaag tggttgcatg ggcgatgaat 300  
 tagtcgtgtc cgagtgaac tagatcaatt gaccttgttg ctcatctaa tgcgtccca 360  
 ggtcacattg ttgtggacag atttaattag cgtcgggttg gc 402

<210> 3671  
 <211> 406  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-066-Q2-E1-F10  
  
 <400> 3671  
  
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 gacagacgac gacaccacga gcccgaagaa gagagccatc gcggctgctg atgacgattg 120  
 caagcctgcc gatgacgagt caacgtcgtg gaagcgctc gtggacggta tgcgccgct 180  
 ccgcctccgc gggcagctgg agtactacc gccgccaccg ccgccaccgc cgctgggcca 240  
 cgccgatgtg taccatgacg tgatcctccc gccgccgtcg caggcacggg tcggcttcga 300  
 gatcaaggag gtgggcatga ccagccgcta cgcgtccgct gaggatctgc accagatgga 360  
 cagcgaccag gaagaggggtg ctganggtgg cgatgacggt gacagc 406

<210> 3672  
 <211> 378  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F12

<400> 3672

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agcgtcgtct ttgtcattgc cgctctcttc ttcgtcgcca tggtcgtagc accgatggcc 120  
gaggcaaagt ccgccgatgc ccctgtggct gacgcgccag ccgatggacc tagcggggccg 180  
gctgctgcac ctggccccca ggggtgtcgaa ggcctgtcag gcaatgagga tgacgatgat 240  
gactccacca attgaggcca cacacgtcgg cccggttaaa tttggaacaa gacatggaag 300  
aaaaatgaga gcaatgtctt taaaaccatg ataatgtgtg gtcattccact catccatgga 360  
tacatccttg ctctccct 378

<210> 3673

<211> 458

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F2

<400> 3673

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gaggtggagg cggaggcgga ggccggtgca tcgtctgca agaagaaccg tatccagggtg 120  
tccaccaaca agaagccgct ctattttctac gtcaatctcg ccaagaggta catgcagaac 180  
tacgacgagg ttgagctctc cgctctgggg atggccattg gtaccgtggt gaccgtcgct 240  
gagatcctca agaacaatgg cctcgccact gaaaagaaga tcctcacatc aaccatcggc 300  
accaaggatg aggcgaaggg ccggcttgct cgtaaagcca agatcgagat cctgctgtgc 360  
aatcagaga acttcaacag catcatgtcg agcaagaagt ccgagcgccc gaagccgccc 420  
gccgaggaag agataaggtg tgatctatcc gaacaacg 458

<210> 3674

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F3

<400> 3674

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 ctagecgttg cgcgcgatgt cgccaacgcc ggccacgcca agcccctaac gcctggcggg 120  
 cgcgtggtac acgacaacca cggcaagttc acggccgggc cgtggaaacc cgcccacgca 180  
 accttctacg gcgggcgtga cgggtccggc accacggcgg gcgcgtgcgg gtacaaggac 240  
 acgcgcacgc aggggtacgg cgtgcagacg gtggccgtga gcaactgtgt gttcggtgac 300  
 ggcgcggcct gcggaggggt ctacgaggtg cggtcgctgg acagccctag cgggtgcaag 360  
 cccgacgcgg cagccctggt ggtgacggtg accgacc 397

<210> 3675  
 <211> 434  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q2-E1-F4  
 <400> 3675

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 aggtggtcac cacggccgcc gagegcgcgc cgcaggaccg gatggtggcc ttcacgtacc 120  
 tgcgcattgg ccccgacctc ttccaccggc acaactggcg gcgcttcgcc gccttcgtgc 180  
 gccgcattga cggcgccggg tcgtgccggg aggcgcgcca gcgggaggcg cacggcgctg 240  
 cgcaggccac cgggtcgtg gtgcacgagg ccgcgcgcgc gctgcggagc tgaccggccg 300  
 ggacgggacg ggacggaacg gaagcctacg atcgactgta catacagggg ttgggacttg 360  
 ggagggagct cgggttcttg ttgggttttc ctttgggtgg agagcgaggg agcgagtcg 420  
 agagccagcg agca 434

<210> 3676  
 <211> 189  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q2-E1-F5  
 <400> 3676

gtaccgatcc acgaattccg ggtcgacca cgcgtccgca cacgcgtccg ctactcctt 60  
 gatgacttga tgacatagct acgaaggaaa tagctttaca tctcgtgtgt ctaggcagca 120

gaagttttgt ttgcactttg caaaactgta tatecttctc agctgtctca ttgtaaccca 180  
 ttcttttttc 189

<210> 3677  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F6

<400> 3677

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 atggacttcc gacaccaacg aggatggcgg cgacgagatc aaggatgctg ctgccccgaa 120  
 agaatctgcy gagggtcagt aagatggatt cagtctcacg acctgctgct gctgatgttg 180  
 aggagtaacc agaaccagaa ccgccgtcct cgattctgat agattatctt ctagtatacc 240  
 ttgtgttgtt gctgttgctg tcgtcgcgcc ggtgtatgcy atgaagctgc cattgctgct 300  
 gttttaatta agcattctag atgttatacc gcatgctttg tttcggtttc taatgtcgat 360  
 aaatgggtggc cggatgctgg ttttcgtgct ccgagccggc caccaggaag aagacctgcc 420  
 tgcc 424

<210> 3678  
 <211> 444  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F8

<400> 3678

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 tcgaaagtcc tcaacatcgc ttcgtgcagc ctgcatcgat cgacgagggc tgcacgaacg 120  
 atgggggtccg cctccgcctc agtgatgacg accagcctgc tggcgctggc gctggcagcg 180  
 ctggctttcg tctccagggc cgcggcgcag ggcaacggct gttccagcgt gatgatgacc 240  
 ctggccccgt gcatggactt catctccagc aaggcgtcgg agccggggat ctctgctgc 300  
 tcgggtgctgg ctggagtcgt gcagaccgac ccccgctgcc tctgcatggt cctggacggc 360  
 accgccacgt ccttcggcat cgccatcaac cagaccaggg cactggagct ccccggcgtc 420

tgcaaggtca aggcgcgcgc gctc

444

<210> 3679

<211> 367

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F9

<400> 3679

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cgcgctcgac accgcgaaga cgcaatggta ccacttcacc gccatcgtgg tcgccggcat 120

ggggttcttc accgacgcct acgacctctt ctgcatctcc ctcgtagacta agctcctcgg 180

ccgcatctac tacaccgtgg aggggtccgc gacgcccggc accctcccg cgcacgtgtc 240

cgcgctccgtc aacggcgtgg ccttcgtggg cacgctgtca gggcaactcc tcctcggtcg 300

gctgggcgac aagctcgggc gcaagaaggt ctatggcatg acgctcatgc tcatggctct 360

ctgttcc 367

<210> 3680

<211> 374

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-G1

<400> 3680

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cggcgtgacg gacatgaacc tgtcgagcac ctacggcaag ctcgccatgg tgctcggtggg 120

ctccagcgtg gggcgcaacg acggcgggcg ctgcgcgggc ctcgtagcct gtgggatcgt 180

gatggggacc atgtccaacg ccaacaacct gatgcaggac ctcaagacgg ggtacctgac 240

gctgacctcg ccgcacaccg tgttcacacg ccaggccatc ggcacggcgc tcgggtgcgt 300

cgtcaaccgg gtcattgtct gggccttcta cagggtgggt cagaacggcg acaccgacgt 360

cttcgacgcg ccct 374

<210> 3681

<211> 372

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-G11

<400> 3681

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acggctgcct cgtgtacgag tacatggagc acggcagcct cgaggaccgg ctgttccgtc 180

ggggcggcac gccgccgac ccgtggggcg agcggttccg gatcgcggcg gagatcgca 240

cggcgctgct gttcctgcac cagacaaagc cggagccgct ggtgcaccgg gacctgaagc 300

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gtctggtgcc gc 372

<210> 3682

<211> 351

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-066-Q2-E1-G12

<400> 3682

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ttctttccgc catggaggct cggaggaagc ccgcgggtgtg ctgtgccctt cttgtgctgc 120

tcacgtcgc ctccagcgca acggtgtcga ctgctcatga cgagagctgc tggaaggacg 180

acgaccacca ccctatctgc tttcccgaag actgctggc gacctgccag gatcacggcc 240

acgcggacgg ccgctgcaac tgggcatggt cgtggaggcc gtattgccag tgctgttgg 300

cggactgcc ataggcgcga acagctgcgt cgcattggcgt cctggctgcc t 351

<210> 3683

<211> 328

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-G2

<400> 3683

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gcgaccaccg caaggccacc tcatggcacg ttctccccgc tgactggaag ttcggcgctca 120  
cgtaccaggc atccaagaac ttogaagtag ccactttccc tctctttctt catcctgcat 180  
atgcccacaa gcaaccatgc aaatgataac atgcatcatg catgcatatt cattctttcg 240  
ctcatgcact ccaatatggg gccggagtta aaaaaatgta gatcaatgtg caaactcaaa 300  
tgacatctta accagttgtg atcaaaat 328

<210> 3684  
<211> 414  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-G3

<400> 3684  
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acaagttgtg tactgccaac ggcgctcca aggtcacctg caaggacgtc accttcaaga 120  
acatcacccg cacctcctcc accccggagg ccgttagcct gctctgcact gccaaaggtcc 180  
catgcaccgg cgtcaccatg gatgacgtca acgtcgagta tagcggcacc aacaacaaga 240  
ccatggctat atgcacgaac gccaaaggga gcaccaaggg ttgcctcaag gagcttgcac 300  
gcttctagac cctccgtcga ctgacctatc tctctagtta taatttttct ctcgtccttg 360  
cattgcccac tacatgccac ccattggtaa cgcacaacag ttaaacgaca gaca 414

<210> 3685  
<211> 453  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-066-Q2-E1-G6

<400> 3685  
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acattgatcc gcttgagcag tattccgatg atgaaatctg gcaggcattg ggccgctgtc 180  
agttgaaaga agccgtagct tcaaaacccg aaaagcttga tgcttcagtc gtcgacaatg 240

gtgagaactg gagtgttggg caacgtcaac tgctatgcct gggccgggtg atgctaaagc 300  
acagcagaat actgttcatg gacgaggcca ctgcttccgt tgattcccag accgatgctg 360  
tgattcagaa gatcatccgg gaagactttg cagcttgtag cattatcagc attgcgacaa 420  
gaatacctac ggtgatggac tgcgacaggg tcc 453

<210> 3686

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-G8

<400> 3686

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agcgcgggccg acctggcctc cggggggcagg aggtcgtccg gcgtgccggt gttcgtcatg 180  
atgccgctgg acaccgtcaa ggagtgcggc accgcgctgc accgccgcaa ggcgggtgcag 240  
gccagcctct ccgcgctcaa gagcgcgggc gtcgagggcg tcatggtgga cgtgtggtgg 300  
ggcatcgccg agcgcgacgg cccggggccg tacaacttcg cgggctacgc ggagctcatg 360  
gagatggcgc gcaaggccgg gctcaaggtc caggccgtca tgtccttcca ccagtgcggc 420  
ggcaacgtcg gcgactccgt cagc 444

<210> 3687

<211> 421

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-066-Q2-E1-G9

<400> 3687

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caaagatgga gtttgagttt gaaaggagaa gagtgacaaa agaagacatt agggagctga 120  
tattccgtga gatattggaa tatcatccac aactgctcaa agactatata aatggcacgg 180  
agaggacaac ctttctgtac ccaagtgtg tgcaccaatt taggaagcaa tttgctcatc 240  
ttgaagaaaa tagtggaac ggacctgtga ttccaatgga aagaaaacat acttctcttc 300



ctaggtctac tattgttcac tcattctcaa ttctgtcaa ggaacaaccc cgtatcggcc 360  
catgtangga aaggccttca tctgatgagt cctacaggaa tcctcgggag acagaacaat 420  
a 421

<210> 3688  
<211> 348  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-066-Q2-E1-H1  
<400> 3688

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cggagacttc ctggtcatct cttttgtcaa ctgcacttga ggatcaaccc acacttagtg 180  
actgccttgc ctggtcccat gctgtcagac attagagttg cccagtgatt acactattac 240  
agtgcagctg tagcacattht atttgagcat ggtggatctg tttctctggc aacattccag 300  
taatctttgt cttggtgcta atcagccagc agaagtttac atcaagac 348

<210> 3689  
<211> 188  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-066-Q2-E1-H10  
<400> 3689

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acggatctct cgggtgctaatt tcgtgatctt gaccgggtgga agcagatggg gtttgcatgt 120  
ttgtttcatt cttgcattga ttgttcgttg ttaactagtg tatgatgaat cggtcgttaa 180  
cgcttatt 188

<210> 3690  
<211> 248  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-066-Q2-E1-H11

<400> 3690

cgcggtccgat cgaaaggaga accagcagcc tccaataaga gccagccaga gaaactaata 60

gaactctcgc cgccgccatc cgagcgaaca agccatccga ccccggtcccc aaggcaatcc 120

gcgcgcgacg taccaccatc accgcacgag cgagatggac atgaacacga tcctcttcgt 180

cgctctcatc gtcacgccc cctccgccac cgcagtggcg ggctcaccga cgccgcgcgcc 240

tcggggccc 248

<210> 3691

<211> 338

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-H12

<400> 3691

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gaacggaagg tccattcttg gagactccat gtacaagatc ataaccgacg acgtcttcga 120

ccccaacgag ctcttcgagt ccgtggacct gtcgacggag cacaagatcg tggacctcaa 180

ggaccggatc gaggcctccg tcgtcatctg gcaccggaag atcagcaaca agctctcgtg 240

gggccccgcc ggcgtcagcc tggagaagcg ggaggagttc gaggagcggg cgcagaccgc 300

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<210> 3692

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-H2

<400> 3692

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aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 120

aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aggggagaaa aaaaaaaaaa 180

ttgggggggg cctttaaggg tttctgtttt tttttaccct ttcttgaggt ttcaaaattt 240

tccattgggg gcccttattt ttaatcccgg ggccttggtt taaccctggg ttaccgggaa 300

aaacccgggt tttaaccaatt ttaccttttt tgaacgtatt cccttttttcg caaggtgggt 360  
aattttccat tgggccccat tttttcccct tttcaaaaa 399

<210> 3693  
<211> 368  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-H3

<400> 3693

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tagttagcaa agatgtcata aagctagcag actttggtct tgcaaggga gtttcatcat 180  
tgccgccata tacagaatat gtctcaactc gctggtatcg ggcaccagaa gtattgctcc 240  
agtcacatctgc ttatgattct gcagttgata tgtgggcaat gggtgccata atggctgagt 300  
tgttgacact ccacctcttc tttcctggaa ccagtgaagc tgatgagatt cacaagatat 360  
gcaatgtc 368

<210> 3694  
<211> 416  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-H5

<400> 3694

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gccgtggacg ccgtgccccaa gggccatcag gggaggtacg tcatctacgt gaaggccggc 180  
ctctacgacg agatcgatcat ggtccccaat gacaagggtca acatcttcat gtacggcgac 240  
gggcctaagc aaagccgcgt gaccggccgc aagagcttcg ccgacggtat caccaccatg 300  
aagaccgcca ccttctccgt cgaggcgctc gggttcatcc gccagaacat ggggttccac 360  
aacacggccg gtgcggagcg gcaccaagcg gtggcgctcc gggtgcaagg ggacct 416

<210> 3695  
 <211> 431  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q2-E1-H7  
  
 <400> 3695  
  
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 ttggtacggg agggcgagga aatggaataa gacggctatt ccaatcctaa tcgggacaaa 120  
 gtttgatgac tttgctcagc ttcctcttga gatgcaatgg gccatcgta accaggccag 180  
 agcatagca agagcgatga aggcgaccct cttcttctcg agcgcgacgc acaacatcaa 240  
 cgtgaacaag atcttcaagt tcatcacggc caagctcttc aacctcccggt ggacgggtgga 300  
 gcgcaacctc accatcgggc agcccatcat agacttctga cgaccccttc ctctaactag 360  
 taactcgga acacacgcaa gacgaacctt ggtaaataac aagggtttac aaggtcctgt 420  
 ctttcattc t 431

<210> 3696  
 <211> 359  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-066-Q2-E1-H9  
  
 <400> 3696  
  
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 gccggggccg acgaccagtt gaagcgagga aggtggccaa aactgagggc cgggctacta 120  
 tcttttgcta taactaaaga tagggcgaag tttaatttct ccaataaatt ctgtccgagc 180  
 aaaaagtatg atgggggttt tagtcgagat ggtaaagtga tgacgcgcgt gtggaccaag 240  
 accaagagtc atggcttgct gtacttggtg tttctgagct gcaacactca atcgactact 300  
 aaactaaggt aataatatat atatatatga tatgcttaat aagatcatac acaatgcac 359

<210> 3697  
 <211> 432  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations

<223> Clone ID: LIB148-059-Q1-E1-B1

<400> 3697

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gaggcggagg cggagacgga gacagagact gaaggcgaag cggaggcaga ggtcgaggcc 120  
gaggtggagg tcgaggtgga ggcggaggcc ggtgcatcgt ctgcgaagaa gaaccgtatc 180  
caggtgtcca ccaacaagaa gccgctctat ttctacgtca atctcgccaa gaggtacatg 240  
cagaactacg acgaggttga gctctccgct ctggggatgg ccattggtac cgtggtgacc 300  
gtcgtgaga tcctcaagaa caatggcctc gccactgaaa agaagatcct cacatcaacc 360  
atcggcacca aggatgantg caanggccgg cttgtccgta aagccaagat cgagatcctg 420  
ctgtgcaaat ca 432

<210> 3698

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-B10

<400> 3698

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agcggctgca cgcggccttg ttcttcgtga tgggattctg gctgctggac ttttccaaca 120  
acacggtgca gggccccgca cgcgcgctga tggcggacct cgcaggcagc cacggaccca 180  
gcacggcgaa cgccatcttc gtgtcgtgga tggcgcgcgg gaacatcctg ggctactcgt 240  
cgggggtccac cgacaagtgg cacacctggg tcccgttcct gcagacgagg gcatgctgcg 300  
aggcgtgcgc caacctcaag gccgccttcc tgggtgcggg ggtgttcctg ggctgtcca 360  
cgggtggtgac catgatcttc gccgcgagg tgccgctgga cccggcgggc gcggcga 417

<210> 3699

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-B11

<400> 3699

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 agcttttcgag ttcattcaggg gaagtattcc cacttggtgt ttatgcagaa gcatatccat 180  
 ctccagagga aggtggcccg tcagtaaacg cctctcgtgc acagattact cttgctgttt 240  
 tggagaagca caacaacgac cttcaagtca aagttatgaa gcaaattctg tggattgatg 300  
 gcgtgaggta tgagctacag gaaatttttg gtcttgtaa ctccactgaa gcggatgttg 360  
 ctgatgctga tgccgatgac acggggaatg aatgtgttat ctgcttgtaa gaaccaagag 420  
 aactg 426

<210> 3700  
 <211> 434  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-059-Q1-E1-B2  
 <400> 3700

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 gagggaaggg ctccgcgtcg tgtcccttct cttcctctc ctccctctcc tctctccaac 120  
 accccatcca tcagcgtgc cctccgcatt gctcttgatc ccatccagta catcgattct 180  
 ccccccaaga tcaaaggccg gaggaggaag aaaggtagg gagtcggcca tgggatgctt 240  
 ttcattgctgc tgtgtggcag atgacgacaa cgttggcagg aggaagaagc atgacgatcc 300  
 ctatgttctt atccctgctc atgtttataa ttttggacct agccgggttc cagccccaac 360  
 ccctgtcatc tccactggca gagctcagcc aattgcaatt acgggcaatt catctggaag 420  
 agctgaagga aatt 434

<210> 3701  
 <211> 450  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-059-Q1-E1-B4  
 <400> 3701

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cacagacaat gcgatgaaag ccttggtcct cctggtcctc cttctgcata gtgcatggtg 120  
 agaaggaaga gtcaaagggc atcgatgcga aagcgtccgg gcctgggtggg tccttcgaca 180  
 tcaccaagtt gggcgccctcc ggcaatggca agacagacag cacgaaggct gtgcangagg 240  
 catgggcatac ggcgtgcggc ggcaactggga agcagacaat cctcataccc aagggcgact 300  
 tccttgctcg acaactcaac ttcacaggcc cttgcaaggc cgacgtgacc atccaggtgg 360  
 atggcaatct gctggcgacc acggaccta gccagtacaa ggaacatggg tattggatcg 420  
 agaatccacc cgtggataac ctggatcatca 450

<210> 3702

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-B5

<400> 3702

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 actccttcac caccactgct gagcgggaaa ttgtcaggga catgaaggag aagctcgct 120  
 acattgccct ggactacgac caggagatgg agactgccaa gaccagctct tctgttgaga 180  
 agagctacga gctgcctgac ggacaggtca tcaccattgg tgcctgagcg ttcgctgcc 240  
 ctgaggtcct cttccagcca tccttcattg ggatggaagc tgcctggtatc cagcagacca 300  
 cctacaactc catcatgaag tgcgacgtgg atattaggaa ggatctgtat ggcaacatcg 360  
 tcctctccgg tggtaacct atgttccttg gcattgctga cagga 405

<210> 3703

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-B8

<400> 3703

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 acgcggtgta caggcagggc cgcaacgggg acgccatcgg gccgctggag atccgggtgg 120  
 tgcgcggcgg cacgttcgag gaggtgatgg actacgccat ctgcgcgggc gcctctatca 180

accagtacaa ggcgccgagg tgcgtgtcgt tcggacccat catcgagctg ctcaactcca 240  
 ggggtggtgtc cagccacttc agcccggcgt gcccacgta cagcccgcac aagaagtgat 300  
 gacctaatag cattggccgt cggagctcgg aggctggggg tcacggtcac gggccagact 360  
 gagctactac acttctgcta gtactatata ttgctacttg ttgctctcta cagtgcgtgt 420  
 c 421

<210> 3704

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-B9

<400> 3704

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 gaggaggccc tgaacgcggt gtacaggcag ggccgcaacg gggacgccat cgggccgctg 120  
 gagatccggg tgggtgcgcg cggcacgttc gaggagggtga tggactacgc catctcgcgc 180  
 ggcgcctcta tcaaccagta caaggcgccg aggtgcgtgt cgttcggacc catcatcgag 240  
 ctgctcaact ccagggtggt gtccagccac ttcagcccgg cgtgccccac gtacagcccg 300  
 cacaagaagt gatgacctaa tagcattggc cgtcggagct cggaggctgg gggttcacggt 360  
 cacggcccag actgagctac tacacttctg ctagtactat atattgccac ttgttgctct 420  
 ctac 424

<210> 3705

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C1

<400> 3705

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 ggtgcaagtg caagcgcaag gcagacaaac gcggcgagaa ggagagcaga gaagcccggg 120  
 gccacatccg tgtggcctgc ggccggcggc gcggttacga acgcctcgtc gtctaaggat 180  
 gtggccagca gggcagcaaa atcgccatcc accgccgcgc agaagacgag gcctgctggg 240



gtcgagaagg cagcagcgtc ttctttctgta aagctgaaga cgaagcctca gaaaacaacg 300  
gcaggagctg gaaaaactca agctgcacct cccgcccgtg ctctctctgg cacggtaata 360  
gcaaagaaga gtacgggagc cgagaactat gtcccatcc agaagaacaa caaccgtgcc 420  
ggcggcgaga ccaaca 436

<210> 3706  
<211> 416  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-059-Q1-E1-C10  
  
<400> 3706

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agtggcgag agcagacgca cgtgaaccat tgtagctgtc cctgtcgtcg tcgtcgtcgt 180  
caacgaatcc acacaaggaa aggatggaga agaagccgac catcctcatg aacaggtacg 240  
agctcggggc cacgctcggg cagggcacct tcgccaaggt gtaccacggc cggaacctcg 300  
cgtccggcga gagcgtggcc atcaaggta tgcacaagga gaaggtgatg cgcgtcggca 360  
tgatcgacca gatcaagcgc gagatctcgg tcatgcgcct cgtccggcac cccaac 416

<210> 3707  
<211> 423  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-059-Q1-E1-C11  
  
<400> 3707

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tcgagcaatt ataatctcac agaataataa acatcatggg gcaagcctca cggctcgctc 120  
tcctcgccgt cgtggcgctg ctgtccgccc gcctcctccc gcaggcgctg ggtaagggtg 180  
ggggaggcag gggacacggt ggcgccgtca acccgaggt cgcgggcata tgctctcgca 240  
ccccgttccc ggaggtgtgc acgtccaccg ccgggcggca cgcgtccaag taccgggtca 300  
tcgacaacct ggccgtgctg aacatgcatg tggacgcgtt cgccaagcgc accgcgcatg 360

cgcgcaagca cgtcgcgagg tcggctcgca ccatcccgcc gcatcagacg caggcgctca 420  
cgt 423

<210> 3708  
<211> 382  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C2

<400> 3708

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gtgaggaggt cggatttggc gccaagagga tggaggaggc aggcgccgtg gagaacgtgg 180  
aggccatatt cgggttccac gtcaccgtgc tgctccccac cggcgtggtg ggctctaggg 240  
ccggccccgt gctggccggg tgccgggttct tcgaggcggg gatcaccggg ggtcggcggc 300  
cacgccgctt cccccagaa catcatacac cccgtcctgg cagcctccag cgtcgtgctc 360  
atcctgcaaa gcctcgtgtc gc 382

<210> 3709  
<211> 195  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C4

<400> 3709

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taccaaagat gccagcagga ttcgcccttc caaaaagttg cccaccctga atggcaaatg 180  
gaactcccc tgtaa 195

<210> 3710  
<211> 417  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C5

<400> 3710

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cggaaggggc aacaacgacg acgccgacgc ggagagcccg ggcgacgcgg ccccggcgtc 120

taacatgacg ccgcccgcga tgggtgcaggc gcccgccgcg tacttcccag ctcccgccgc 180

cgctccaacg gccgcggcgc cgcccaagcc cgggtggcggg aaccaggcgc acgaggcttc 240

cgccgatgac tcggcgctgc ggctcgccat cacggggcag gcgttcgcgt tccgcgagct 300

cgccgcccgc acagaccact tcacgccgta caacctcgtc ggtgaaggcg gcttcttccg 360

ggtctacaag ggccggctag agaaaagcgg cagacggtgg catcaagcag ctggaca 417

<210> 3711

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C6

<400> 3711

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agccggtggg cacggtgggg agcgccacgc tggcggtgga gtcggactac ttcacggcgt 120

acggcggtggt gttccggaac gacgcgccgc tggccaagcc cggcgccaag ggcgccagg 180

cgggtggcggg gcggtgttc gggaccaaga cgcagatcta caactgcacc atcgacggcg 240

gacaggacac gctgtacgac cacaagggcc tgcactactt caatggctgc ctcatccggg 300

gcagcgtcga cttcatcttc ggcttcggcc gcagcttcta cgaggactgc cgcacgagct 360

cgggtggtaa ggacgtggca gtgctgacgg cgc 393

<210> 3712

<211> 400

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C7

<400> 3712

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gatggcgacg ctccagaggc gggcgggcaa gcggcgacgg cagtcccag tcgaacgagt 120

ggcggcgctcg caccctagggc tccgtggtaa cgggtgattgt gcgaggcacg ataggcttcg 180  
gcagtgcagg tgggtggccat gggacacgcg ggtagctccg acggggcgctg gaggcgcggt 240  
cgtctccagc ggtggtggcc acatgaggcg tggttggctc cgggtgcctt cgatgaccaa 300  
ctccttcgat ctgatggcct cggcggcggc gtcctccgat gacctcctcc aattctttgt 360  
ttatgcatgc ggctgttggt tgagcccata ctaatttttc 400

<210> 3713  
<211> 285  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C8

<400> 3713  
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tatgcatct caaccaaagc gcggtgggtc cgtgcatgg cattagccat acatgcatcg 180  
gcacttactg tcgagttgct gcgacaagcc gattactcca atgggtccgt gacgagcagt 240  
catcgcgaca tcctccgtct acatcatcct cagctcgatc cagtg 285

<210> 3714  
<211> 414  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-059-Q1-E1-C9

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attgggtagc cctgctcaca ctggaaggaa gaggggatct cctaggactt ctgaaagcca 180  
gcatgctata gcagaggcca aaacatatgg ggaaaattca agaggcagaa agtgaccaa 240  
ctctcagagc agcattgacc gtatgagcag aatgctgaac cagatgggtc atccattcat 300  
cattcataga aaaaaaaaaat gataagttcc ttgctagcgc cagacaggaa cattgcatca 360

gtccatctag gtcncttggg ctttgtgaat agagctttcc tcttttccct ttac 414

<210> 3715

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-D1

<400> 3715

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ctccctccca gccatggcga cgccggacaa caaggggcac gggcatccgc tgcccaagtt 180

tggggagtg gacgtgaaga atccggccac gtccgagggc ttcaccgtca tattccagaa 240

ggcccgcgac gacaagaaga ccaccaccgg ccctggggct gggaacgcgc gcgcaggcat 300

tccgcccggc ttcaggaacg gcggcggcga cggcgggtac aggcccgact tcggcgacgg 360

caaccagtac acgccgccca aacggaagaa gtgggccttc tgtggctgct gaatccaaac 420

ctccctgtgc tgctgtgctg a 441

<210> 3716

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-D10

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tttcgaagaa gtaacacttc tccgtgaggc ctgagcccct cgccgcgggtg agccaagccg 120

gcgcacgtcg ccccgggggt cagctcacc accgagcccc aaccaattaa taatatatat 180

atatagctag gatcgatcgt cagtaaaatg gcaggctccg ccgtcctgag gagccccctg 240

tccgtcctcc tctacatcct cgccgccgtg cccgccaccg ccgeggcgac gccgaccgac 300

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gcggagcgcg cggaggcggc gcacgcgtac aaccgcg 397

<210> 3717

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 <213> Zea mays  
  
 <223> Clone ID: LIB148-059-Q1-E1-D11  
  
 <400> 3717  
  
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 tcacggtgca gctatacgtg gatctcctct cacacaaggt acatcatcag tcccatagcg 120  
 ctgaggcgtc gaacctatca gaagtcgctg tgtccgaagc tgaagaagca gtcgctgcac 180  
 cgctcatcgc aaagcttgag gagaatgtca gtgcagccgt gacagatacc gcaatatat 239

<210> 3718  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-059-Q1-E1-D2  
  
 <400> 3718  
  
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 cgaccagatc aagcgcgaga tctccgtcat gcgcctcgtc cgctagacga acgtcgtgga 120  
 tctgcacgat gtgatggtea gcatcatcaa gatatacttc gccatggagt acgtccgggg 180  
 cggcgaaactc ttcgcccgcg tcgccagctg tcggctcaac gaggacgccg cgagaacgta 240  
 cttccaccag ctcgtcggcg ccttcgactc tctgccacag ccgctgcgtc tagcagcgcg 300  
 accgcaatcc cgagaacctc ctcgtcgacc atcagggcat gctcaaagtc tccgatctcc 360  
 gccgcagcgc tctcatgtag tgccagcatc aagatcgccct gctgc 405

<210> 3719  
 <211> 401  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-059-Q1-E1-D3  
  
 <400> 3719  
  
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 ccagctcatt tgcttcgccc gttcgccgtg cgtgcgctcg caaccaaga ctcgtttcct 120

tctttgtgct cctgttcgtt ccttccttcc ctggaaccct tccccgtaa gctcgccgct 180  
 gcgctgcgtt cggatggcag ttggaggcgg cgtgtgtgtg gcgtcgccct cgcgctcgtc 240  
 ggctcaggcg tggtcgtgga ggacgagcgg ggcgcgccgc cgcgcggccg ttaggtgcag 300  
 cgctcgttggc gaggccgggc cgggcgcgcg cggcgggcgg gtggaggacc cctaccggac 360  
 gctgcgtctg cgccgggggg ccacccgcgg cgaggtcaag a 401

<210> 3720  
 <211> 403  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-059-Q1-E1-D4

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 tgcgcttcca gagccatgcc gtgcttgctc tgcangaggc agcagaggcc tacctggttg 180  
 gtctcttcca agataccaat ctgtgcgcga tccatgccaa gcgcgtgacc atcatgccca 240  
 aggacattca gctggcaaga aggatccgtg gcgagagggc gtaagtctgt cgacgggagg 300  
 aagaactctg cgctcgtttt gtgtgttcgc ctctctcacc ctgtaagttt tgtgagaaga 360  
 tgatctagta aactgtactt ggctgtttg actgtanccg cag 403

<210> 3721  
 <211> 257  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-D5

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 gtgtcactcg gagaggttgt tcggtcgagg ctgaagcagt tgtcggctat gaacatgctt 120  
 acgaagaatg catttgaggt cgtcgccatg aatttagcga gtggaagaga ttggtagatt 180  
 cagagagatg ttcatataa cgcacaccat catggagtgt agtttgtcac ttgaggagat 240  
 gaaggagcgg tttccgg 257

<210> 3722  
 <211> 407  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-059-Q1-E1-D7  
  
 <400> 3722

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caccaccgcc cagcaataat ggcgagagc atgaggattg tggcgctggc cttggtggcc  120
ctgctggtgg tggcgggcggc ggcgcccgtg gccaccgcgt acggctgcta cgacgactgc  180
tacgagcgct gcgccaacgg caagaaagac cccgcctgca ccaagatgtg caaccaggcg  240
tgcggtcca cggaaccagg cgccgggtgcc gccggcgccg cgccgggttg atcgcccagc  300
gcattcatcg cttcagctcg atataatcgc tgctccgtca gcaaccaca tatgattcga  360
tcaatcttcc tcctccaatt tctcgaacct gtccaaattt ttttcct                407
  
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<210> 3723  
 <211> 349  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-059-Q1-E1-D8  
  
 <400> 3723

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caccaccgcc cagcaataat ggcgagagc atgaggattg tggcgctggc cttggtggcc  120
ctgctggtgg tggcgggcggc ggcgcccgtg gccaccgcgt acggctgcta cgacgactgc  180
tacgagcgct gcgccaacgg caagaaagac cccgcctgca ccaagatgtg caaccaggcg  240
tgcggtcca cggaaccagg cgccgggtgcc gccggcgccg cgccgggttg atcgcccagc  300
gcattcatcg cttcagctcg atataatcgc tgctccgtca gcaaccac                349
  
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<210> 3724  
 <211> 414  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-059-Q1-E1-D9



<400> 3724

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gggccatcaa ccaggccagg tcgttccgct ggaacctgac ggccagcgcc gcgcgccccca 180  
accgcgaggy ctctaccac tacggccaga tcaacatcac ccgcaccatc aaggtcatgg 240  
tctcccgcg cccatcgac ggcaagctcc gctacggctt caacggcatc tcccacaggg 300  
acaccgagac cccctcaag ctgcgcgagt acttcaacgt caccgacggg gtgttcagct 360  
acaaccagat tggcgacgtg ccccccgcg ttaacgggcc actccatgtc atcc 414

<210> 3725

<211> 363

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-E1

<400> 3725

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catggtgcgc gcagctatcg cgggggtcac gacggcgacg cgattccagg agctggtaga 120  
ctggatggag gagcggaagg cggcattcag ggacgacggc aagtggacag agacggtgaa 180  
tctggggctc aggagccccg cgctcatcat gttcgggctg cttcagttcg ccatcgacag 240  
ggacctcggg ttcgggaaga ccagcctcgt gctgccttgg gtgcgccatg gccggctggg 300  
gtccgcgtcc gtgacggtgg tgccctgcc caacggcgac gggtcgtggt tcttcggcg 360  
cac 363

<210> 3726

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-E10

<400> 3726

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ccggcaaacc acatcaagtc gcgatggaga tgaagaaggt cgcctgcgcc gtccctcgccg 180  
 ccgccgcctc cgccaccgtg gtcctcgccg ccgaggcccc ggcgcccgcc cccaccagcg 240  
 cctcctcggc cgcgttcccc gccgtcggcg ccgtgctggg cgcctccgtg ctctccttct 300  
 tcgcctacta cctgcagtaa aattaaagga gggtcggagg gagatgctgc tggctgocat 360  
 tgccctgtatt cggttggatt ccgtttatat atatatttaa gtactttaat ttgggtc 417

<210> 3727  
 <211> 405  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-E11

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 ccaagcaggg agcgtcggca aacgagcagc tgggcaagct ttacgcacag gtgcgtccaa 180  
 atgctgttgc gctggtggat gccttcaact acacagacca ctacctgggg tctgtgctgg 240  
 ggcggtacga tgggaatgtg taccacagcg tgtacgagga ggcgtggaag gaccctctga 300  
 acgagacggt ggtgcccagag ggggtaccag agtacctccg ccccttgctc aagcagcagc 360  
 tcaagctctc caggctctag tctgatcggc tccccccct ggaat 405

<210> 3728  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-E12

<400> 3728  
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 gttcaacaac accatgaggg agtgcattct gatccacatc ggccaggctg gtatccaggt 180  
 cggaacgcg tgctgggagc tgtactgcct cgagcatggc attcaggctg atggccagat 240  
 gcccggtgac aagaccattg ggggaggtga tgatgcttcc aacaccttct tcagtgcagc 300

tggcgctggg aagcacgtcc cccgtgctgt ttttggtgac cttgagccca ctgtcatcga 360  
 tgaggtgagg actggcacct accgccagct cttccatcct gagcagctca tcagtggcaa 420  
 ggagga 426

<210> 3729  
 <211> 430  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-059-Q1-E1-E2  
  
 <400> 3729

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 agatcaagga tgctgctgcc ccgaaagaat ccgcggaggg tcagtaagat ggattcagtc 120  
 tcacgacctg ctgctgctga tgttgaggag tgaccagaac cagaaccgcc gtcctcgatt 180  
 ctgatagatt atcttctagt ataccttgtg ttgttgctgt tgttgctgtc gtcgcgcggg 240  
 tgtatgcgat gaagctgcc a ttgctgctgt ttttaattaag cattctagat gttataccgc 300  
 atgctttgtt tcggtttcta tgtcgataaa tgggtggcgg atgctgggtt tcgtgctccg 360  
 agccggccac caggaagaag acctgcctgc ccttgttggt tcaacgttgt aagaatgacc 420  
 tacggtgtat 430

<210> 3730  
 <211> 368  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-059-Q1-E1-E3  
  
 <400> 3730

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 tcggatcaga agaaaagaat agttaggtcc cggtggtcga tcgaacgaag ctgctgctgc 120  
 taccggccgg ccgggcatga cgatgacacg gacgatgtgc ctaagcctgc tgcttctact 180  
 actggcggcg gcgtcgacag cgacggcgca tttcacggtc ggcgatgtgg atgagtacgt 240  
 gtccaagcgc acgcaggagt cccgccacag gaacaacggt ggcgcgggca tcgatgacct 300

catctccagt gcggcgcgct tccacgccaa cgtggatgca cgcgcctatg gccgtagatt 360  
ccgactgc 368

<210> 3731  
<211> 293  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-E4

<400> 3731

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tgctcggaaa ccacctggct ttgcgtttat tgattttgat gataagaggg acgcagagga 120  
tgcaatccgt gacctagatg gtatgtgatc aatgtattgc tgtcaacatg ttataaacct 180  
ctattggat gttgtatcag atgtttatat gacattccat atgttgtcgg tgttatttgt 240  
gaagaatatc tgagttggta ctaaattaca ttcagagctc tatttggat aaa 293

<210> 3732  
<211> 375  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-E6

<400> 3732

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ccctccagaa cctgctctct ctctctctac gagactacga ccgtgtaagg acatggccgt 120  
cgagcgcttg aagaccgggt tcgagcagtt caaggccgac gtctacgaca agaagccgga 180  
gctgttcgag ccaactcaagg cgcaccagtc gcccaagtac atgggtgttcg cctgctccga 240  
ctcccgcgtg tgcccgtcgg tgacctggg cctgcacccc ggcgaggcct ttgccgtccg 300  
caacatcgcc agcatggtgc cgccctacga caagaccaag tacgccggcg tcggctccgc 360  
catcgagtac gccgt 375

<210> 3733  
<211> 421  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-059-Q1-E1-E7

<400> 3733

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tgcaggtggg gttctatgga aagacgtgcc cggcgggcga aggcgtcatc agcgacatcg 180  
tcaacaacga aatcgctatg gaccggggca tctcccttgg cctcattcgc ctcttcttcc 240  
acgactgctt catcacgggt tgcgacgctt ccattctcct ggacgagtcg cccgccggcg 300  
acgtcccaga gaaggagtcg tccgccaacg gcttcaccct ggtcgggctc agaaccatcg 360  
acatcgccaa gtcccacgta nagggcatgt gcccgggcaa ggtctcgtgc gcagacatcc 420  
t 421

<210> 3734  
<211> 392  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-E8

<400> 3734

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gcactgctca tcgtcctcgc ggctgccgtc gcggtcctgg ccgcgcggcc ggcgtctgca 120  
ggcggggggag ccgcggcggt ggcggagatc tgcatgaaga ctccgtcccc cgacctgtgc 180  
accaggacgg cggggaagca cgccaacaag tacaagggtg tggacgcggt gacggtgcta 240  
gagatgcagg tggacgcgtt caagaagcgc gtgaaggcgg cgcggaggct cgccaaggag 300  
gaggtcaaga cggccgcgac gcccgaggcg cggagggcgc tgaacctctg caagacctac 360  
tacctggacg ccgccgacaa cctcggcgcc tg 392

<210> 3735  
<211> 409  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-E9

<400> 3735

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cgaagcttcc gccggaggtg ctggccaagc tcccggccga cgtgctggcc agcatcccgc 120  
cggagacgct ggccaacatc gcggcgctgc aggggcagct gcagacgagc gagatcctgg 180  
ccaccatccc ggcggcgcag gcgcagggcc agctgccggc ggacctgccg ccggaggtgc 240  
tggccaagct cccggccgtg cagagccaac tgccggccaa cattacgccc gagatgatga 300  
ccagtctcgc cgccgtgcag cagcctgcgg ctgctggcca gcctggggcg gccccggctc 360  
tcccggccga catccctcag atccccaaga tgcccgcact ctcccggt 409

<210> 3736

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F1

<400> 3736

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ctccgtgagg cctgagcccc tcgcgcgggt gagccaagcc ggcgcacgtc gccccggggc 120  
tcacgctcac caccgagccc caaccaatta ataatatata tatatagcta ggatcgatcg 180  
tcagtaaaat ggcaggctcc gccgtcctga ggagccccct gtccgtcctc ctctacatcc 240  
tcgccgccgt gcccgccacc gccgcggcga cgccgaccga cgccgccatc gacgaggcgt 300  
acgcgcctct cgtcaacctc accgctaacc aggagtactg ggcggagcgc gcggaggcgg 360  
cgcacgcgta caaccgcgcg ggtaccaga ccgacct 397

<210> 3737

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F10

<400> 3737

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cgacacgcag cgccgcctgc tgtccgcct cgctccgac tggtctgccc tgctcctctt 120  
caagtccgcc tacctcctcg cgctcctcct gctctcgctc ctctccgtcg ccgctccgt 180

gtttctccgtc gcttccgtct actccgccaa gcgcgacgcg ctcaccttcc cgcgcggtgct 240  
ctccgtcgtg ccccgctgtt ggaggaggct cgcgcgcacg ttctctgcgc ccttcgcgct 300  
cctcttcgcc taccacgcgc tcgccgtgct cgtcttcgtc ggctctctcg tcgccgcgga 360  
caacggctcc ggctcgcgg gctgctcgc ctctctcgtc gccgtgcct acctgctc 418

<210> 3738

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F11

<400> 3738

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cgtcggcgtc gccatgcgc gccatgggtt gcggtggctc caaggaggcc gtggccaccg 180  
gcaacaccag cgcggcgc aaggctctcc ggaggaagtc ctctccgtc tccaccggcg 240  
caagccacac ctccaccacg tcgccgtcgt cctccggcgt cgtcgtcaag gacgtcgtga 300  
aggatgcggc ggcgccggc gacgtgatga cgcgcgcga cgcgagaag cctatctctg 360  
tcgagcccaa ggagacgcc atcgtggtga tggagccaa gaaagatgat ggcaataaca 420  
aggtggccgt gga 433

<210> 3739

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F4

<400> 3739

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aggtggccgt caacgacgtc gtcttcaaga acatccacgg cacctccaac acgccggagg 180  
ccatcacgtc caactgcgc aacaacctgc catgccagg cgtgcagctc gtcaacgtcg 240  
acatcaagta caatggatcc ggcaacaaga ccatggccgt ctgcaagaac gccatcggca 300

agtccatcgg cttggcaaag gagctcgct gcatctgaac caattgacta acatgcatat 360  
 attatatata taatcactct tcggtacctc tccccttctc acgtaatctc aagtctccac 420  
 cgaatatata 430

<210> 3740  
 <211> 237  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-059-Q1-E1-F5  
 <400> 3740

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 cctcaccgct gtgatctaga gcgccccacg tcgcctcggg gatcactctc actaccgagg 120  
 cccacccatt tagtactata tatatatctc taggatcgat catcactaca ttggcaagct 180  
 cctccgtcct gaggagccta ctgtccctcc tcgtctacat cgtcgcgggc gtgcccg 237

<210> 3741  
 <211> 366  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-059-Q1-E1-F6  
 <400> 3741

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 gcgtgcagcc atggctgcc gcccgcagcc gccgcggttc gttaccctgc tcgaccggcc 180  
 ctagcccttg cgcgcggtcg gctgcccagc gcggcggcgc gaccagctag cactatcgtc 240  
 gtcatgctcg tgcctcgtc gctcgttcgg tgcgtcgtgc acgcaacatg tcgtcgtacc 300  
 tcgcctcgtc tcgccgtcgt cgcgaggtac ttgatatatg ttgggaatga ggggagtagc 360  
 agcacg 366

<210> 3742  
 <211> 418  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB148-059-Q1-E1-F7

<400> 3742

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aaggggacgc cgtcggcgctc gttccggctc cgcaacggga gcctgaacgc ggtgcgcctc 180  
cgccgcgtgt tgcacctgtt cgaccgcaac ggggacggcg agatcacctg ggacgagctg 240  
gcgcaggcgc tggatgcgct gggcctggac gccgaccgcg ccgggctgtc cgccaccgtc 300  
ggcgctctac tggccgacgg cgccgcgggc ctccgcttcg aggacttcga caagctccac 360  
cgcgcgctcg gggacgcctt ctccggcgca ctgggaggcc aggacgacgc caccgccg 418

<210> 3743

<211> 385

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F8

<400> 3743

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gcaaaacacc ttcgccggcg agagcatggc gatggcgtag cgtgtcctgg aggtcacctt 120  
ggtgtcggca aatgacctca agaaagtgtc gctcttctcc cggactcgca tctacgccgt 180  
ggcttccatc tccggattcg acctccgcat cccttccac agcacccaag cagaccacag 240  
caacggctgc aacctctgct ggaacgccgt ggtacacttc cccatcccg ctgccgctga 300  
caccgcggc ctgcactcc acgtgaggct ccgcgccag cgtctatacc tgggcgatcg 360  
cgacatcggc gaggtgtttg tgccc 385

<210> 3744

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F9

<400> 3744

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gcggcgcgga ggctcgccaa ggaggaggtc aagacggccg cgacgcccga ggcgcgagg 120  
gcgctgaacc tctgcaagac ctactacctg gacgcccgcg acaacctcgg cgcttgcaag 180  
cgcgccatcg gcttccgcga cgccgtcacc atccgcgcca cgatgagcat ggtggcgag 240  
gacacgcaga actgcgacga ggagttcagg aaggccgtct ccaagaaccc catggaggac 300  
cacaacaggt cgctcatcga gatgtccgag atctgccgca cgctctccaa catgatccct 360  
tacgaacatg tccattgatt tgtttgtttc ttttcccga cccctacta cgttcggtaa 420  
cgtcgtc 427

<210> 3745  
<211> 305  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-059-Q1-E1-G1  
<400> 3745

tgcaagactc tagagtgagt cgtattaacg cgcgttggac gtcggcggtg gcaaggctgc 60  
cgacggcatc agtgagggcg cacgctaagt ggcgccggca agccttgccg cgaggacatg 120  
tcagctgctc cgcatgtcga caccagctat cggatcatccg gtgagctgaa gtatctcagt 180  
cctgagacat catctcttca tggttcgca cccaaagact gagtctccga tagctcgctt 240  
aggcggcagt ttcgcaagca cgtgcgcatg aatctcaagg caggttccaa ggtggccggg 300  
ctcac 305

<210> 3746  
<211> 418  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-059-Q1-E1-G10  
<400> 3746

ccacgcgtcc gccacgcgt ccggagttaa ccacacaacn gccttcgcct gtctccgcgc 60  
tcttctcgg acaaagccgg ggccgttcgg cgggaggcag gggacgcacg ggcaggcagc 120  
catgaacggc atcaacccca acggcggtt cctgtcgtac gggaacatgg agagctacgc 180

gatgtgggtg gcgaccggcg tggcgtcggc cttcttcgcg tccctcgagc gctgctcctg 240  
catccacctc cacaccggcg aggacgacgg cgacgaggag gaggaggacc tcgaggaggc 300  
ccgccgctcc ttctcccgcg cgatccctga gtactactac gaccgggtccg gctcctccgc 360  
ctccgtcgcc aagatgtgac ctgaccggac cgcgctccc ctccgcccga gaaatgcg 418

<210> 3747

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-G11

<400> 3747

tcgcgggtcg acacacgcgt ctacacacac gtctgggacg atgcagaggg ggaggagggg 60  
gtgtccgtgg tgatcggcac ggacgctggg tggctactgt tctactcgct cgcaggcgat 120  
ctattgcaca agcagagtat atatcctgca aagatactga aactcaactt tcgtgagagg 180  
aaggagaacg cttgggaaga ttcaggctca gatgaacttt ctgtagtggt tcctgggtgtt 240  
atcgcgcgct ttgatgggtg tgaccttcag gctttctgtg catgttcaag gataagaact 300  
gaattcttgg ttgctcacag aacgttctta aaaaagcatt tcaagatgta aaatcacgcc 360  
tgtggaaaga taagtttgaa gagcaagatg ctgaggatga ggaaactttt ggacgaatac 420  
ccttt 425

<210> 3748

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C10

<400> 3748

ccacgcgtcc gcaaccgtgt gccttttggg gacgcgatgt cgtccggcaa caagatcagc 60  
gtggccttgc tgagcgtggc cctagtgggc ctgctcctct gccacctcgc caccaccgcc 120  
tccgccacc agaaagacat ccacgtcctc ggcagcgtcg acggctccag cgacggcagc 180  
agccccgagt ccgaaggccg cgtcgtctac gcggacatga agctggctga tacggaatcc 240  
gatgcgccgg cgccggcgcc ggcgccgggg ccgtcgtccg gttgaactga gaagcgtgcg 300

tccagccaag caaggtgggtc aaaaccgaga actaattaag ggctcgattg tgtgtccggc 360  
tactactgtt cttgccataa ttatatatag atacgcaaa 399

<210> 3749  
<211> 391  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-044-Q1-E1-C11  
  
<400> 3749

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cgacgccgtc gccgccggag cggccgtttg ctgcgcaggg ccggcctcgc tgtcttctag 120  
caggaagcag cagcagcagc ccgacgacgc cggctgcggc agcagcagca gcgacgacca 180  
ctaccagcac gacgtgatca tgctgaggcg gacgaggagc gggcgggcat tcccgcgcgc 240  
gatctccgtg atcggcaagg gcgggcgggc gtggctctgc ctgcgggcgc accgcgaggg 300  
tggaagcctc gtgctgcggc agatgcgcct gccgtcgcag gagctgctgc agccctgcaa 360  
ggaggacggc aggttcaagc tctcatgca c 391

<210> 3750  
<211> 401  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-044-Q1-E1-C12  
  
<400> 3750

ccacgcgtcc gcgatcacga caagatggca tgcacaaaca atgcgatgag agccttggtc 60  
ctcctggtcc tcttctgcat cgtgcatggt gagaaggaag agtcaaagg catcgatgcg 120  
aaagcgtccg ggcttggtgg gtccttcgac atcaccaagt tgggcgcctc cggcaatggc 180  
aagacagaca gcacgaaggc tgtgcaggag gcatgggcat cggcgtgcgg cggcactggg 240  
aagcagacaa tctcatacc caagggcgac ttccttgctg gacaactcaa cttcacaggc 300  
ccttgcaagg gcgacgtgac catccaggtg gatggcaatc tgctggcgac cacggaccta 360  
agccagtaca aggaccatgg taattggatc gagattctac g 401

<210> 3751

<211> 443  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C6

<400> 3751

ctccccgggtc gacccacgcg tccaccaca cgtccgcca cgcgtccggc agagatgctt 60  
cccactgaat cactgatcgt tgatcagtg tccaatattt tggcaagtgc agctttgaat 120  
aaattgaaca gattggcctc gtggccattt tctgtattt atctgtagtc aggtccaatt 180  
cttttctgtt ggtgagcgca agttattcat agatgactcg gtcattggaa tatttgtaat 240  
attatgtcat gtatcgtaa atttcagttg tttgtttca gctgccagaa ctgtagcaa 300  
gagtattctg gagctggaag ctgaacgca actggttgta tctatatcct tgaatgccga 360  
ataaaggacg ggcaataaac tgcagcgaat tatgtgctgt cagacattgt tgaaaaacca 420  
atgtatggga aattgagtgg atc 443

<210> 3752  
<211> 400  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C7

<400> 3752

tacaacaccc tatagtgcg tegtattagg cgtccggcag agatgcttcc cactgaatca 60  
ctgatcgttg atcagtggtc caatattttg gcaagtgcag ctttgaataa attgaagaga 120  
ttggcctcgt ggccattttc ctgtatttag ctgtagtcag gtccaattct tttctgttgg 180  
tgagcgcaag ttattcatag atgactcggg catgggaata tttgtaatat gatgtcatgt 240  
atcgttaaat ttcagttgtt ttgtttcagc tgccagaact gttagcaaga gtattctgga 300  
gctggaagct ctaacgcaac tggttgtatc tatatccttg aaggcctaataa aaaggacggg 360  
caataaactg catcgaaata tgtgctgtca gacattgttg 400

<210> 3753  
<211> 417  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C8

<400> 3753

ccacgcgtcc gggcggttcc tgagggctcc tacgctggtg gcaagcccat ggggagcgac 60  
tgctacggtg gtgctccgtg ggcagaagac gaggaggtgc gccgcctcag cgtgcggatg 120  
caggcggttg aggcagaccg tgagtccatg aggcaagcca tcatgtccat gggagccgag 180  
aaggcgcagg tgatgctgct caaggagatc gcgcagaagc tctgcaagga cacgacacca 240  
ccagttccag cggcagcagt ggctcagcac agcttttaca aagggggcaa cacacagccg 300  
gccatgacca tctactgtgcg accaccacgg caccggctt tgcttatgca aaggaaactg 360  
gtgaagaaga agccatcact ccttgctgca gtggtcaagt gggttacatc aatcatg 417

<210> 3754

<211> 377

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C9

<400> 3754

gggtcgaccc acgcatccag cgcggttcgc atgagcgcgc ggaatgttgg gggcgccaccg 60  
gtcaaacatg ctcaggagga ggctctctcc tgctctacct gtctgctccc ggctccactc 120  
tatctctttc gccatacgcg cgagacggag gataggaaac agctaccatc gagcgaagaa 180  
caaacagggg gcttcacacg tgcattgtag atcaattccg atcgctggcc ggcgggaatt 240  
gaactaacga cgacctactt gcaaccgggg cgggctttgg attaataatt ccggcatgac 300  
caatgggcaa attccattac ggcttggtgc cccacggcac gttgtttctg gtggaccact 360  
acggctcggc agcagca 377

<210> 3755

<211> 447

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D1

<400> 3755

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aatcatagta gtgccgcacc gccgttccta gggttccaga gaccagcaag acaaacctcg 120  
 cgtggcacct gcgtgccgtc ctgcagtaac gcgccagtag aagcttgctc catcggctcg 180  
 cgtcggtgac ttctccctct tcgccgcgtt cgtcgagcga ggtcacgagt cacctgatga 240  
 gcaagttggg acctggaatc tcaagtcca ggtcaagaac aggtaccgca cgatgaggcg 300  
 catggaggat gctgcgatga gttcgtgaga gatctaggcc gtcgtctccc agtcaacttt 360  
 gggttgctgg accgttgctc ccttataatg taattattta tttattttgt atagaactcc 420  
 tattatgtag taaagatgtg acattcg 447

<210> 3756  
 <211> 429  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-044-Q1-E1-D10  
 <400> 3756

gggtcgaccc acgcgtccga atggctagcg gcgtcctcca tcgctccgcc tccctatgtc 60  
 tccgcccggc cgccggctcc tccgccgact ccggccgggg ccacggcgcg gttatgatcg 120  
 gtgattcgag gacgcgcgtt gctgctctgc ggctgggagg atctagccgg agagagttat 180  
 tatctgtcac aatggcctcc agagatcaca ctggcttgac ccgacaactt cttgattttc 240  
 aacatgatac aatagatgag gtaggcgcag gacatgaccc attcattgat ttgaaagcga 300  
 gattcatgga ctttaaacag agaaactatg tggaaaaatt ttcaaattac caaacccttg 360  
 ctgagcagca aacaccaaag ttcattggtg ttgcttgtgc tgactccagg gtctgcctta 420  
 ccgctgttt 429

<210> 3757  
 <211> 427  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-044-Q1-E1-D11  
 <400> 3757

cccacgcac cgagtggcta gggcgctcct ccacgctcc gcctccctat gtctccgcc 60  
 ggccgccggc tcctccgccg actccggccg gggccacggc gcggttatga tcggtgattc 120

gaggacgcgc gttgctgctc tgcagctggg aggatctagc cggagagagt tattatctgt 180  
cacaatggcc tccagagatc aactggctt gacccgacaa cttcttgatt ttcaacatga 240  
tacaatagat gaggtaggcg caggacatga cccattcatt gatttgaaag cgagattcat 300  
ggactttaaa cagagaaact atgtggaaaa attttcaaat taccaaacc ttgctgagca 360  
gcagacacca aagttcatgg tggttgcttg tgctgactcc agggctctgcc ctaccgctgt 420  
tttgggg 427

<210> 3758

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D3

<400> 3758

gtcgacgacg cgtccgatgc ctactacaag gcgctcaacg agcaccatgt cctcctggag 60  
ggtagcctcc tgaagcccaa catggtgact ccaggctccg actccaagaa ggtgaccct 120  
gacgtgattg ctgagtacac cgccgtacc ctccagagga ccgtacctgc tgctgtgcct 180  
gctgttgttt tcctctctgg tggacagagc gaggaggagg ccaccgcaa cctcaatgcc 240  
atgaacaagc tcagcaccaa gaagccgtgg tcctgtctt tctccttcgg ccgtgccctc 300  
caggcgagca ccctcaaggc ctgtgctggc aacgtggaga acttgagaa ggctagagct 360  
gccttctctg ccagggtgcaa ggccaactct gaggctaccc tcggcaccta caatggtgat 420  
gctgccgccg acac 434

<210> 3759

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D5

<400> 3759

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agcggtgcc acgatgacga ctaataagcc cctcctctc ctgcacctgg cgtccgcgt 120  
ccttggtgag gcgccggccg ccgcgaacgc gcccgcgagg gcgttcagca actgggtggc 180



gatgaaccat cagagctacg cgctgtacgc gcagaagtcc gtcggggacg ggggcaagga 240  
 gcccttgac aagaagctgt cggaggcgga gaagaataag gtcacgtacg tgggtggaccc 300  
 cagcggcaag ggcgactaca ccaacatcac cgcggcgctg gaggatatcc cgggtgagcaa 360  
 caccaagcgc gtgatcctgg atctcaagcc cggcgctcag ttccgcgaga agctgttcct 420  
 gaacatcagc a 431

<210> 3760  
 <211> 443  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D6

<400> 3760

aattcccgtt cgaccacgc gtccgaaaca acaagactga cagcgacgat gatgccacag 60  
 ctgcgtagcc tcgtcgcgtt ggtcctcgtg gccacggcca tagccgcgcg tcccggcggtt 120  
 gggtttgtcg tcaccggccg catctactgc gacaactgcc gcgcgggggtt cgagacaaac 180  
 gtgtcccacg ccatccaagg cgcgacggtg gagatggagt gccgccactt caagtcgcag 240  
 cagggtccacg acaaggcgga ggcgacgacg ggccccggcg gctgggtacag gatggagatc 300  
 agcggcgacc actaggacga gatctgcgac gtgcgcctgc tcaagagccc cgaggcggac 360  
 tgcgcgaga tcgaccactc ccgcgaccgc tgccgcgtcc cgtcacgcg caacgacggc 420  
 atcaagcaca gcggcggtccg cta 443

<210> 3761  
 <211> 350  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D8

<400> 3761

tcccgggtcg acccagcgt ccagcgagag gatggttatt tcattcttct gtacagttag 60  
 agaggattca tatgagcggg aaaataggcc aagtatgtag agtgatctgt cttgtataga 120  
 aagcaggcaa aaaggtccaa tgtatatgtg gaacgtagca tcttcagttg tgctaggcct 180  
 ccattctttt ttttcttgt ttggatgggc cttttgcttc ttctagctg ctgtatcatg 240

tatgctccca ttgagccatg agttgtaaaa tattaaattg aagggtgcttc ttccataata 300  
aaataagcaa gataaaaaaa aagttatcag aaaaatttaa aaaagtaaaa 350

<210> 3762  
<211> 337  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D9

<400> 3762

cgggtcgacc cacgcatccg atttctggtc agctaattca ttcattctgta cagttagaga 60  
ggattcatat gagcgggaaa ataggctaag tatgtagagt gatctgtctt gtatagaaag 120  
caggcagaca ggtccaatgt atatgtggaa ggtagcatct tcagttgtgc taggcctcca 180  
ttcttttttt ttcatgtttt ggatgggcct tttgcttctt cgtagctgct gtatcatgta 240  
tgctcccatt gagccaggag ttgtaaaata ttaaattgaa agtgcttcat ccataaaaca 300  
aacacagtca cgaaaaccct ttttttattg agcagtg 337

<210> 3763  
<211> 439  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-E1

<400> 3763

gtcgaccgac gcgtccggtg atcgacccca ccgggccacc gttccttgcc aactgccaag 60  
catcaccgag aaatctaata actcgttgct cttcgtcttc gtcacgcat cgatccagga 120  
gggggaagca gaaggaggga tggcggagaa cccgcagctg tttgggaatg ggatgccggt 180  
gccgttctac agtgagatgt tcgtcctcgc ccgggatggc gtcgagttcc acgtcgacaa 240  
gatcccatca gtccttggtg gtcattgtgaa aacaaaaggc acaatttacc tgtctaatat 300  
aaggatggtg tttgttgcca acaagcatgt tggcaacttc tttgcttttg atatgccact 360  
gttggttggtg cacggtcaga agttcaatca gccaatattt cactgcaaca acatctctgg 420  
attcgttgag ccagttggtt 439

<210> 3764

<211> 446  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-E10

<400> 3764

gggtcgaccc acgcgtccgg gaagtcgcag ggcgacgtca tgatgaacgg cgccttcttc 60  
aacgagtcgg gcggccagaa cgagcgcaag tacgacaggt tcgacttcat cccggccaag 120  
cacggccgct acgtcgggtca gctcacgcgc ttcgccggac cactcaagtg catcgtcggc 180  
cagccgtgct agtagacagc ggcccgggtcg ggcacatact cctcttccta tatacatcgg 240  
atttggatgg gcggcatata tgtacgtgtg tgtaatatat tattactaca tcttgtacta 300  
tatgcgacga ttgcttgact gatgaatcac gctttttagg ttagaccaat ttagaaggga 360  
attagagtgg attaaattcg ctcccggtaa aaaatgactc gaagaaaatt tagggactgt 420  
ttggtttgtg gttaaattgtg ctacac 446

<210> 3765  
<211> 416  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-E11

<400> 3765

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gctactctcc tcgagcgagg cgcgagcac ggggacatca aatggcggca gcggcgga 120  
tcggtggttt cgcggcgagg agagtggcgg tggcgacgct caggccggct gcgcaccag 180  
ccccggcggc ggcggtggca ccgcagccta ggagggcggg ggccggcgag tcgctgcaga 240  
cgaccgccac cgaggcgctg acggcggtac tcgccggcac gaccaacggc gctgtgcatg 300  
ctcggatgaa tagtaaggct acaagtgaat tcacttcaca ggcagttact gcaaattcta 360  
ggagaaagac aaagatagtc tgcaccatag gtcctcaac caacaactcg gagatg 416

<210> 3766  
<211> 390  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-E12

<400> 3766

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cttcaatcca ccgtcagtag atgcgggtcca gttcatttca gtggttcaat gaggcggaca 120  
tggtcatcag cgtgcaacgg tctctaatacc agggacaata ctctgtggatt accttaactt 180  
tggtcatccgt cccgcgagtg aactcagagt ggacaaacaa tgtaacaaac tagtcatcga 240  
tggtctccctt taatttcata catggcattc ctggtttgta accaaatgtt ccaatttcac 300  
ctccgacgcc aatgttaagc tggaatgcaa ggaatttggt caccgcaagc tcaaacgctt 360  
caacgaacgg gttaccgaac ggaaagggac 390

<210> 3767

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-E5

<400> 3767

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gccacggcaa atcagcttcg cggcgagag catggcgatg gcttacggtg tcctggaggt 120  
caccctgctg tccgcaaata acatcaacaa agtgctgctc ttctcccgga ctgcacata 180  
cgccgtggct tccatgcgag gattcgacct ccgcattctt tcgcacagca cccaagcaga 240  
ccacagcagc ggctgcaacc cctgctggaa cgccgtggta cacatcccca tctcggtctc 300  
cgctgacatc cgcggcctcg cactccacgt gaggtccgc gccacgctc tatacatggg 360  
cgatcgcgac atcggcgagg tgtttgtgcc catcgacgac ctcttggtcg gcgcgacaa 420

<210> 3768

<211> 450

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-E6

<400> 3768

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ggatccctcg ctaataacat catggtcgtg ggtgtcgtcc ttgcagcgt cgtcgccggc 120  
 gggtcatgcg ggccccgaa ggtgccgcc ggtcccaaca tcaccaccaa ctacaacggc 180  
 aagtgggtca ccgccagggc cacctggtac ggtcagccca acggtgccgg cgctcctgac 240  
 aacggcgggtg cgtgcgggat caagaacgtg aacctgccac cctacagcgg catgacggcg 300  
 tgccgcaacg tccccatctt caaggacggc aagggtcgtg gtcctatgcta cgaggtgaga 360  
 tgcaaggaaa aacctgagtg ctggggcaat ccagtcacgg tgtacatcac tgacattaac 420  
 tacgagccta tcgctcccta ccacttcgac 450

<210> 3769  
 <211> 414  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-044-Q1-E1-E7  
 <400> 3769

gaccacgcg tccgaggatt catcgtccca tagctcaggc tctcatcaga tgatcgatca 60  
 cgagttggag atggctccat tctatcaata tggcatcact ctaccattca tggggttgcg 120  
 agcgccacca cgtgcatcat ggatcctttt tccagcgcac cagctttgat cagggattca 180  
 catgtagggt tttatgatac ggtcagatct accgtcaccg cgagactata tacgctagtg 240  
 catatgggat tgggattgta ctacatggaa caagttctgt ggaatcgctt gtcgttacgt 300  
 ctagatcata cgaggcagtg ccggctgcgg ctcatgctca gatgtgagat tcttggcatg 360  
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 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-044-Q1-E1-E8  
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 tcgtcgccgg tggctacgtc ccttggtccc ctttctacgc cagggctctc gatctctcca 180

ctctgaatgc caagcggaga gccgtcgcta gtctgcaca cctccgcgcg atgtggatgc 240  
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ggggctcaag taattgctcg cgggacttca catccgccgc tgtgcctctc tacgtcgagg 360  
agcgactcca acgctcgctc tatgccgagc gaggacacgt gtcacttgaa aatcatgttg 420  
gtacctggat tctcaagt 438

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<211> 446  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-044-Q1-E1-F1  
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gcgggtacaa ggacacgcgc gcgcaggggt acggcgtgca gacggtggcc gtgagcacgg 300  
tgtttgtttg cgacggcgcg gcctgcggcg ggtgctacga ggtgcggtgc gtggacagcc 360  
ccagcgggtg caagcccgcg gcggcggcgc tgggtggtgac ggcgaccgac ctgtgcccac 420  
ccaaggacaa gtggtgcaag ccgcgc 446

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<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-044-Q1-E1-F10  
<400> 3772

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agaggcacgg agtggcgcag agcagacgca cgtgaacat ttagctgtc cctgtcgtcg 180  
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aacaggtacg agctcgggcg cacgctcggg cagggcacct tcgccaaggt gtaccacggc 300  
 cggaacctcg cgtccggcga gagcgtggcc atcaaggtca tcgacaagga gaaggtgatg 360  
 cgcgtcggca tgatcgacca gattaagcgc gagatctccg tcatgcgcct cgtccgccac 420  
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<210> 3773  
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 <213> Zea mays  
 <223> Clone ID: LIB148-044-Q1-E1-F11  
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 cctccttcac cactgttaag ttgcgcgcgc ccaccagcgc ccgtgaggtc acctccaccg 180  
 ctaacgaaat tatcacctcc tccaccaccg ataaggtcgc cacccccacc acaagcatac 240  
 tcacctctc catcagctcc aataagctca cctcctctc cgatgcaatc cctccaccg 300  
 cctgctccag tcagctcacc accaccacct ataaaatcac caccaccggc tccagtaagc 360  
 tcaccacctc ctctggcgca atccccctca ccacctgtc cagtcagctc actaccacca 420  
 cctggtaaat cacctcct 438

<210> 3774  
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 <213> Zea mays  
 <223> Clone ID: LIB148-044-Q1-E1-F5  
 <400> 3774

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 gccgcccaac agg 133

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 <211> 431  
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-F7

<400> 3775

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aagccagttg accacacact gcgcctgggc cagcagagcc ttgtgacatg ggctacaccg 180  
aggcttagtg aagacaaggt gaggcaatgc gtcgatccaa ggctcggaga cgaataccct 240  
ccaaaggctg tagccaagat ggctgctgtg gccgccctct gcgtgcaata cgagggtgaa 300  
ttccgtccca acatgagcat cgtcgtcaag gctctgaacc ctttgcgtgca cagccggtct 360  
ggcaaccgcc ctactgcctc gtcggcctcc cagcgtgccg agcgatccgg actgtgaatt 420  
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<210> 3776

<211> 449

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-F8

<400> 3776

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agcgtgacgg gaaggacagc gaagacctga gcagcacagg cgacaaggct tgtgtcgggc 180  
tcgggagcag tgatataaac atcccgatgg aagaagcggc tgatgaacct gttaaaccgg 240  
cggaagctgt ggacgaagct gggctgaaga gagatgtctg ctgttcacca gctgagccaa 300  
acgaagccgt tggtcagaac gagctcaatg aggctgctgt cgtcggtgaa acgacgactg 360  
aaccgaagga ggctgaggat gaagccaaga taataaagca agtcgactgc gaaactgcat 420  
caaaagaagt tgctagtact ggggccgag 449

<210> 3777

<211> 421

<212> DNA

<213> Zea mays



<223> Clone ID: LIB148-044-Q1-E1-F9

<400> 3777

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cttctgatgg ccctcgacgc cgtcctttcc tctagtgcc cagctttatt gcagatccag 180  
ccctctgac ctcgtcttct ttcacctctc caacatgaag gtcaacacca agatcaagct 240  
ggagccggtc atggcgccgt cgtcgtccct gcccgggagc gccagcgagc taccgaccc 300  
gccgtcaccg ttcagctcca acacggcgca ccacccgtc tccgtgcca ccacacctag 360  
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<210> 3778

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-G1

<400> 3778

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tggtggcgct ggcgctggtg ctggcggtgc cgctgctcca gcccgggccg tccgacgccg 180  
cggcgcgacc cgccccgcag tcgcccggca cggcggtgtc gtcggggccc gccaaagcca 240  
agtgcgtggc cggcgccagg aacgaccacg cgtgctgcgt cggcgccgtg caccgcccgg 300  
acagccagga cgaggagggc tccagcgtca ccatctacgc gcccgccgcc gcgcccgcg 360  
acgtcagcca cgacgacggc agcgactaca acgatcccga cgtgcccac c aacgaccagc 420  
tcgtcgtcgt cgggcac 437

<210> 3779

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-G11

<400> 3779

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cgcgacgcga ttgccggcga tggcgagcct caccctgccg ccggcgatgg cgaaccacg 120

gcaggacgcc atcgacctcc aaaaggcctt caaagggttt ggctgtgaca gtacaacagt 180

gataaacata cttactcatc gcgattcagt gcagcgtgga ctcatccaac aggaatacag 240

ggctatgtat catgaggaac tctcccatcg catttcatct gaactcaatg gaaaccacaa 300

gaaagctatg ttgctgtgga ttcttgatcc tgctggacgt gatgcaactg ttttgagaga 360

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<210> 3780

<211> 429

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-044-Q1-E1-G4

<400> 3780

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aacatccttc ccaccgcctt ggtcaccatg gtcataatcc ccagcaaggc tgccgctgac 180

acccgccgac tctcactcca cgtgaggctc cgcgcccagc ctctatgact caccattgac 240

gacaaccacc aggtgttcat ccgcaactgc tacatcaagg accacgacgt gctagcccgc 300

catatcgacg ccggcaacgg cgtggggcgc cccgcgggcg tgctcatcaa cggcaanggc 360

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cgcgtctgc 429

<210> 3781

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-G5

<400> 3781

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 ccgtggagag tgagtggccg gccgggctac cagctaagac acgacgggtcc atccagccat 180  
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 gttcgacacc aacggggacg gcaagatctc gctgtcggag ctgacggagg ctctgaggac 300  
 tctggggtcc acctccgccg acgagggtga gcgcatgatg gccgagatcg acaccgacgg 360  
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 gaaggacgtc gcaa 434

<210> 3782  
 <211> 434  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-G6

<400> 3782

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 gtcacacctg ttctctgtct cattgtgtcc accgatatgg cacaggcaag ggaatgagac 180  
 aagtacagtg agcgatttgt tggggcatgc atgatcgag acaactgcgc caatgtgtgc 240  
 cgcggtgagg gcttcttggc cggcatgtgc agcaccttcc gccgccgtg catctgcact 300  
 aggcagtgtc aaacaagatc gctcgatcgt tcgccatgca tcgacaacct attcttaata 360  
 acgttcatta tctcgttctt atttatgacg aatgtcatgt atgttctggt gactgtcatg 420  
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<210> 3783  
 <211> 438  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-044-Q1-E1-G7

<400> 3783

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 tccggcaatg gcaagacaga cagcacgaag gctgtgcang aggcattggc atcggcgtgc 240  
 ggccggcactg ggaagcagac aatcctcata cccaagggcg acttccttgt cggacaactc 300  
 aacttcacag gcccttgcaa gggcgacgtg accatccagg tggatggcaa tctgctggcg 360  
 accacggacc taagccagta caaggaccat ggtaattgga tcgagattct acgcgtggat 420  
 aacctgggtca tcaccggc 438

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 <213> Zea mays  
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 <213> Zea mays  
 <223> unsure at all n locations  
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ttctttcttct cctgggtcccc tgatactgca cgcacccgga gcaagatgct gtacgccagc 360  
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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H2

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t 421

<210> 3787  
<211> 428  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H5

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<210> 3788  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H7

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<210> 3789  
 <211> 403  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H9

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ctgcatcccc cggatgtaca agtactacat acagacgaaa gacgtgggtg cgaagcggct 360  
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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B1

<400> 3790

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<210> 3791  
<211> 404  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B3

<400> 3791

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 <213> Zea mays  
  
 <223> Clone ID: LIB148-045-Q1-E1-C3  
  
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<210> 3793  
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 <213> Zea mays  
  
 <223> Clone ID: LIB148-045-Q1-E1-C5  
  
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 <211> 455  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-045-Q1-E1-C6  
  
 <400> 3794



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 <213> Zea mays  
 <223> Clone ID: LIB148-045-Q1-E1-C7  
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 <213> Zea mays  
 <223> Clone ID: LIB148-051-Q1-E1-F5  
 <400> 3796

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 tcggatcccc gccagtgcac gccctggaac ggacggacgg aatggcagcg tcgccggacc 180

acctcttcgg cctgcgcaac agcttctacg tcggcgcata ccacgccgtc atcaccagca 240  
gccagtccct ccccgcgcaac gcgctctccc ccgacgacct cgtcgagcgc gacgcctca 300  
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gcgc 364

<210> 3797  
<211> 148  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
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<400> 3797

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ctgaggcctg acaggagcat ttgagtgg 148

<210> 3798  
<211> 159  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-051-Q1-E1-F7  
<400> 3798

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caaattgtgc cttaaccacg tcgatgtgct gccaaattgt caatccctga tacgggtcaat 120  
catggatgga ccgactgcaa tataaatata ttataccac 159

<210> 3799  
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<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-051-Q1-E1-F9  
<400> 3799

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tcctttctagc gctctttctgc accgtgcatg gtgagaaggc aaagtcaaag gacaacgatt 120  
caaaagcgtc cgggcccggg gggtccttcg acatcaccaa gttggggcgcc tctggcaatg 180  
gcaagacgga tagcacgaag gctgtgcang aggcgtgggc atcggcgctgc ggcggcaccg 240  
ggaagcagac gatcctcatc cccaagggcg acttcctcgt cggaccactc aacttcacag 300  
gcccattgcaa gggcgacgtg accatccagg tgaatggcaa tctgctggcg accacggacc 360  
taagccagta caaggatcat ggtaattgga tcgagattct acgcgtggac aaccttgctc 419

<210> 3800

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-G10

<400> 3800

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agaacgactc ggcattggga gatttcgctg agcactcgcc attcgggagc agcaattcgc 180  
tgccagagtt gggaccagat ggcacacaag atctagcctt ctaccaaaga agcagccctg 240  
aacagcaatg gagctggtcc gggctctgtt caacagagga ttccgatgac ttcgagggtg 300  
caacgaattg ctcgtcagat ctggattgctg tgagaccatc tagtgcccca aaagcttctg 360  
gtttaacaaa cggagggggc tcagctgcaa gaaagtccca actgaagggt gcaaaaagtt 420  
cagaca 426

<210> 3801

<211> 434

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-051-Q1-E1-G11

<400> 3801

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tggccgacaa gccacgtac tccacgttcc tgaagtcct gcaggacacc aaggtcgcg 180

gcgaggcgaa tcagctccgg tcggcgacgc tactggtcgt ccccgacaaa cttgccaaagc 240  
ctctggcgtc gctgcccgcc gataaggtgc ggccggcggg ggagaaccac gtccttctca 300  
gttacttcga ccccatcaag ctggacgaga tgaagacacg caccgccatc ctccccacgc 360  
tgctctccgt cancgacaag anactcggcg tcctcaacta caccagggcc gacgacgggc 420  
aatgtactt cggc 434

<210> 3802  
<211> 456  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-051-Q1-E1-G12  
<400> 3802

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gtcacggttg acctatggca tgataggtgg aaggtttgtg aaggggagaga acccatttgt 180  
cgaggagtcg tatcaaaggg ttgctctcga ccagctcatt aagattgcgg gcatcacgga 240  
tgacgacctg ctgatcatgt ctgatgttga tgagatccca agtggacaca ccatcgacct 300  
cttgagatgg tgcgatgacg ttccggagat actccatctc cagctcagga actacctcta 360  
ctcgttccaa ttctacttg acgacaagag ctggaaggct tcagtgcaca gatacagagc 420  
tggaagacg aggtatgcaa cattccggca gacgga 456

<210> 3803  
<211> 419  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-051-Q1-E1-G2  
<400> 3803

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ggggagtacg ccggatttga tcccacagag ccacttcac gcagtggggg taaagcaaaa 180  
gcagtgcagc aaataaaaaca ggaccatggc tacaagacag ttgttatgat tgggtgatggc 240

gcaactgatac tggaggetcg gcaacctggc ggagcagact tgttcatctg ttacgccggg 300  
gttcagatga gagagccagt cgcagcacia gctgactggg tggtttttga ttttcaagag 360  
ctgatcacta agttgccatg aattcattac ctaccgcaat ttatgaacct ttgcattgt 419

<210> 3804  
<211> 446  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-051-Q1-E1-G4  
  
<400> 3804

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cgccgcctcc tcgcgcagct atcctccgcg ggctctttcg aacgcgtcag cccacacccc 120  
aagggtccagc tcgtcctgat ggccgtcttc ttctacgcg cgtgttacct cgtcctcgca 180  
tgccgcagcg cctgggcgca cctcctcgcg gggggtctca ttgggttcgt ctggatccag 240  
tccggctgga tgggccacga ctggggccac caccgcatca ccggccatcc ggtcctcgac 300  
cgcgctcgtgc aggtgctctc cgggaactgc ctcaccggcc tcagcatcgc ctggtggaag 360  
tgtaaccaca acacgcacca catcgctcgc aacagcctgg accatgaccc ggacctccag 420  
cacatgccgc tctttgccgt ctcccc 446

<210> 3805  
<211> 339  
<212> DNA  
<213> Zea mays  
  
<223> Clone ID: LIB148-051-Q1-E1-G5  
  
<400> 3805

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gagatcttcg gcagcgctct gggactgttc ggtgtcattg tgggcatcat tatgtcatct 120  
caagcgacat ggccagcaaa agcttgattt tcaccatttg tagctctgta aattattcag 180  
atggagtgta tccaaatgtg catgtggtcc aactgcattt tcatgttctt tttatgtggc 240  
gtcctttttg gcaaaacacg aaatgcccgc cgcgtaacgc caacgattgt aaaattgcc 300  
atcctaatagc cggagtactc caagtgtgtt ggagaacct 339

<210> 3806  
 <211> 345  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-G6

<400> 3806

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atcatggggcg tggctgtcgt ccttgcagcg ctcgtcgccg gggggtcatg cgggcccccg 120
aaggtgccgc ccggtcccaa catcaccacc aactacaacg gcaagtggct caccgccagg 180
gccacctggt aaggtcagcc caacggtgcc ggggctcctg acatcggtgg tgcgtgcggg 240
atcaagagcg tgaacctgcc accctagagc gccatgacgg cgtgcgggaa cgtctccatc 300
ttcaaggacc gcaagggtcg cggcgcatgc gacgacgtga tatgc 345
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<210> 3807  
 <211> 404  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-051-Q1-E1-G7

<400> 3807

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gtccccccct tttccgacat tcacaggggg gacaggaaat cagcggccat ggcctcgatt 120
ccggcgacga ctttcgccgt catcttatcc gtctcttct gtgccggggc tggcaccgcc 180
gtcgacaacg acctccccga ctacgtcatc cagggccgcg tctattgoga cacctgccgc 240
gccgggttcg tgaccaatgt caccgagtac atcgcgggcg ccaaggtgag gctggagtgc 300
aagcacttcg gcaccggcaa gctcgagcgc tccatcgacg gggttgacga cgggaacggc 360
acgtacacga tcgagctcan ggacagccac gaggaggaca tctg 404
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<210> 3808  
 <211> 389  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-G8

<400> 3808

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atggttctcc cttccaaaaa gcaaaacaaa agaaactcgt atagtcgatc gacgaccatg 120  
catcacattt ctttttcttc gatcttctct tatttccgca gaaaaacaac gaaggaaacc 180  
caaccaagga aacgcattgt attgcttaag catcgccgga ggagctggtc gatcgctcgc 240  
tcactcacgg gcctgattgt tccggtcacc tgcgtcgtc gtcgagctga gacacgtccc 300  
tccagaagcc cgtgccgtag aacctggccc acacctcctt ctcaagctcc cccgtctcct 360  
ccagctgcaa ggcgggcttc accggcagc 389

<210> 3809

<211> 467

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-051-Q1-E1-G9

<400> 3809

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gccttcacgc ctccctcacc aaataaggtc ccgccctttt ccgacattca cagggggggac 120  
aggaaatcag cggccatggc ctcgattccg gcgacgacct tcgccgtcat cttatccgtc 180  
ctcttctgtg ccgcggctgg caccgccgtc gacaacgacc tccccgacta cgtcatccag 240  
ggccgcgtct attgcgacac ctgccgcgcc gggttcgtga ccaatgtcac cgagtacatc 300  
gcgggcgcca aggtgaggct ggagtgcaag cacttcggca ccggcaagct cgagcgctcc 360  
atcgacgggg tgaccgacgg gaacggcacg tacacgatcg agctcangga cagccacgag 420  
gaggacatct gcgaggtggt cttggtggaa agcccgcgca aagactg 467

<210> 3810

<211> 402

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-051-Q1-E1-H10

<400> 3810

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gcggcgga aaagaagccc cacgtcaacc acggcaagtt taaggcgag ccgtggacgg 180

acgggcacgc gacgtactac ggcgggcgcg acgggttaac tgacaccacg gacagcggcg 240

cgtgcggcta caagggcgag ctggggaaag actacggcac cctgacggcg gccgtgggcc 300

cgtcgctgta caccaacggc accgggtgcg gcgcgtgcta cgagctcaag ggccccaagg 360

gcaccgtggt ggtgacggcc accaacgagc ccccgccgcc gg 402

<210> 3811

<211> 231

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H11

<400> 3811

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ggatgactgg gaacatcact gcaccagtta gcacatcgtc atgtgagctg ggcaccaatc 120

catatgatgg gggttgtgtc ctaccaggac agtatgagta ttaccactgt attggagtag 180

ttcgcagttg gggatacact catgtccaca cacagcacag catcatgtgc c 231

<210> 3812

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H12

<400> 3812

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acatgttgaa gtagtaatag ttactgcagt actgcatctg atttgacttg ttgtatggta 120

aattgcccgt ccacgcaggt tctatacttt gaagattttg taccttgtca gatatcacag 180

tcctcttttg atgtgttgat gagcacagac cggcaaagct atggtttcaa gttaaaaaga 240

ggtttgctgg atgatgaagg aaatgctttt cttgagtggg atagtatgac atttgctcgt 300



attgaaggtg gatttttctgt cgatccttga ttttctctag ccaatgctat gcaagaacag 360  
cagggatctc aacaagaaag ataccttgtg aggaaggcac tcaagtctgc tctatctca 419

<210> 3813  
<211> 411  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H2

<400> 3813

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ttgttggtac cgatctagac accaatctag ccagggtgtac cgtcatcggt gcttttctgct 180  
caggcgtgga tagtccgcga cctgtgacag gagcgggacg ttgtctacgc cgaagccgga 240  
cgggccacgg gtgcgcagag gcggtggcgt tcgccaacag cacctggatc taacctcccg 300  
aaagggaccc catcacgaag aagagatcat agggtttata ttgggattaa cataccaccc 360  
aagacacctt tagacgacgt gaagccgaag agaggtgaaa ataaagatga g 411

<210> 3814  
<211> 343  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H5

<400> 3814

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cattcctaac ggatttctac ccagtcttct ttaggatttc cgattcggtt ctccggtgag 180  
agggtgggaa ttttattttc ctccgctgca accggtgcaa acatttcgaa tccctccatt 240  
gcattcctct ccgtgcaatc ggccattcat atgttccttg gctgcattga ggcatcggtg 300  
cgcaatttt gatgtgagct gaccagacat ggctgcgaaa gac 343

<210> 3815  
<211> 402  
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H6

<400> 3815

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gaggaaacca tcattcctaa cggatttcta cccagtcttc tttaggattt ccgattcgggt 180
tctccggtga gaggggtggga atttgatttt cctccgctgc aaccgggtgca cacatttcga 240
atcgctccat tgcattcctc tccgtgcaat cgggcattca tatgttctct ggctgcattg 300
aggcatcgggt acgcgaattt tgatgtgagc tgaccagaca tggctgcgaa agacggctcg 360
ggatcacagg atctgggggg gcacacgttc tggcccatgc tg 402

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<210> 3816

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H9

<400> 3816

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cgccgtgtgc accgacacca taactgggcg caacttcgtg atcgccattg ttgagttcgg 120
tggttcatgc ctccagatcg acatcgtgaa cctgttgtag atctgcgagt gcaacagcgt 180
gcccgatgtg gccaaactact gtaagcaggt gatcaagatc acagattaca atcagaacca 240
gttcgtgaaa ctgcgtcgtgg cctctatgtt cagcaccgtc gacggtatga gcatcgcggt 300
ccatggcttc gccttcacga aagacaccgg tcacagtagg gtgaccccggt ccattgacgt 360
ctgtaacggc ctgctgggcg agaacgacca gatcagcatc tacga 405

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<210> 3817

<211> 433

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-052-Q1-E1-A1

<400> 3817

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gccgtcgcgc tggtcctcgt gtgctgctcc ggccctctgcc gcggcgagcg gtcggggcg 180  
agggagtgcg aggacctggg gttcaccggc ctgcgtctct gtcgcgactg caacgcgctc 240  
tccgagtctg tcaaggacca agagctggtg gaggattgcc ataaatgttg caccgaggat 300  
tcagatgatt ctatcagcaa gctcacattt tctggtgcaa ttattgaggt gtgcatgang 360  
aaactggtat tttatccaga agttgttggc ttcctogaag aagataaaga cgacttccca 420  
tatgtgggaa ccc 433

<210> 3818

<211> 237

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-A10

<400> 3818

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caatgagacg ctttgcttca aaagtacgtc gtgataacca caaagagctt gatttttaattc 120  
gtcggtaatg ttcaaaggat cgcaaacgct catcggatgg atcaacacga gtgcgcaatc 180  
agacatcgat tgaaccattg tcattgcagc tttcatagct tcttgcgtgtg cgccatg 237

<210> 3819

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-A12

<400> 3819

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caacgaaaat gtgcgcgcgc acagctgcgg tctcttctta catcctcgcc gtcgctgccc 120  
tcagcgcggc cgaggcaccg gcagagtcac cgaaggcagg cagtcttgcc aagggaacgg 180  
ccgagtcacc gaaggcaggc agtctgcag ctcttgccaa ggcacccgag tctgctgcca 240  
cgagaactgc ccccgctaag gcacctcaag ccgcctccac ccccgccgct gccgctgccc 300

catcgtcgtc gtcgtctagg aagtctgggtc cagctgccgc gccgaccacc gccgcctcta 360  
 caccgtcttc ttccacggac gaagagttga gcccttcgcc gt 402

<210> 3820  
 <211> 341  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-A3

<400> 3820

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 gcaactaccg ctactgcgcc cccgaatacg ccatgaccgg caagctcacc aagatgtccg 180  
 acatctacaa cttcggcgctc ctgctgctcc aactcaacaa cggccgcgcg gccatcgaca 240  
 ttggcaggcc gtccgaggag caggctctac ttaactgggc ttgcctctg ctgagagaca 300  
 agaggatgtt cgtgaaactg gccgaccggt ttctgggcaa c 341

<210> 3821  
 <211> 360  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-A5

<400> 3821

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 gacagctata tgctccatct gatcctacca agcaaagttg atccattggt caatctcatg 180  
 aaagttgaga aggttccgga ttctacctat gatatgattg gaggccttga ccagcaaatt 240  
 aaagagatca aagaggtcat tgagcttcca atcaaacatc cggaactgtt tgagagcctt 300  
 ggaattgcgc aaccaaaggg tgccttctt tatggacctc cgggcacagg aaagacattg 360

<210> 3822  
 <211> 432  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-A6

<400> 3822

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actggcaaga ctatcacctt cgaggtggag tegtctgaca ccattgacaa cgtaaaggcc 180  
aagatccagg acaaggaggg catcccccca gaccagcagc ggctcatctt cgctggcaaa 240  
cagcttgagg acgggcgcac gcttgctgac tacaacatcc agaaggagag caccctccac 300  
cttgtgctcc gcctcagggg aggcattgcag atcttcgtga agacctgac cggcaagact 360  
atcacctctg aggtggagtc ctccgaacac attggaaacg tccaaggcaa agatcaagga 420  
caaggagggc at 432

<210> 3823

<211> 427

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-052-Q1-E1-A7

<400> 3823

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caccgccccca caggtagcgg aggcaaagaa gaagagagcg gcggagagcg gcgaggcggc 180  
ggaggcgaag aagatccagg acgacttctg ctgcagcgtg tgcgagggca agaaggggac 240  
ggacctggtc gtgtgcaagg agtcctgcgc gctctcccag cagtccaacc tgggtgctgta 300  
cggcaggatc cagtgcaagg gcaagtgcac cgagcagaag ggcatcacgg cgccggccat 360  
gaaggtctgc caggaggagt gcgacaaggc gtacgtggtg aaggcggccg anggtcacao 420  
ggcctgc 427

<210> 3824

<211> 375

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-A8

<400> 3824

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gaagtaaaca tgtctgaccg ggcaaagatg tcgtggcagg cgtacgtgga cgagcacctg 120  
atgtgcgaga tcgagggcca ccacctcgcg gggcgggcca tcgtcggcca cgacggtgcc 180  
gcctggggcg agagcacggc gttccccgag ttcaagaccg aggacatggc caacatcatg 240  
aaggacttcg acgagccagg gcacctcgcg ccgacaggcc tgttcctcgg acctaccaag 300  
tacatggtca tccaaggcga gcctggtgcc gtcattccgtg gcaagaaggg atcaggaggc 360  
atcacctga agaag 375

<210> 3825

<211> 381

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-A9

<400> 3825

acaacaccct atagtgagtc gtattaagtg cagcactacg aatcccggct ctcggaatgc 60  
gaggtcagga tgaaatctgt ggagaggcag atcacttcgt tacagatggc tcacagtcac 120  
agccagaccg ctggcgtaag cgtaaggaga gatggatcga cgaggcacat ccagggatca 180  
tctcgtggag gccttccgcc gtcgtctcag ccatcgtcag tgaggcgcca gcagcgcggt 240  
tccgagcccc ccgctgccga cgagagccag aggacgacac tggcggagcc ggtagtgaac 300  
cagctggcca gggagtcca cacggggacg gaggcgttcg agcacaacgc gcccgcctg 360  
gccgaggcca acaggctgcc g 381

<210> 3826

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-B1

<400> 3826

ggtccgcaat tcccgggccg acccagcgt ccaccgacac taaaggcgcc tcccaggag 60

tcaacgctgc	acgtcaggct	cgccgtgggc	tccgaggagg	aggaggacgg	cggcggcaaa	120
aagaagcccc	acgtcaacca	cggaagttt	aaggcggagc	cgtggacgga	cgggcacgcg	180
acgtactacg	gcgggcgcga	cggtttaact	gacaccacgg	acggcggcgc	gtgcggctac	240
aagggcgagc	tggggaaaaga	ctacggcacc	ctgacggcgg	ccgtgggccc	gtcgtgttac	300
accaacggca	ccgggtgcgg	cgctgtctat	gagctcaagg	gccccaaagg	caccgtggtg	360
gtgacggcca	ccaacgaggc	cccgcgcgcg	gtgagcgggc	agaaggcgga	gcacttcgac	420
ctcaccatac	cg					432

<210> 3827

<211> 407

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-052-Q1-E1-B11

<400> 3827

attcacgggt	cgaccacgc	gtccacnaat	aatagcaaag	tggtgattca	tcccgnttga	60
atcaatcctt	gccaaataaa	ccctggcctt	gcccttcctg	tcctcgcccc	caattcccaa	120
caaccccccc	ttcggtccg	gaaaacaaaa	ccaattccca	atggaaataa	aaaaggcccc	180
ctgccccgtc	ctcgcggcgg	cgccctcggc	caccgtggtc	ccccgcgcgc	gaggcccggc	240
gcccccccca	acagcgctc	ctcgcccgcg	ttccggccgt	cgcccggtgt	ggccctccgt	300
gctctccttc	ttcgctact	acctgcagta	aaattaaagg	aaggctcngac	ggagatgctg	360
ctggctgcca	ttgcctgtat	tcggttggat	tccgtttata	tatatat		407

<210> 3828

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-B2

<400> 3828

gggtcgagcc	acgcgtccgc	tctcactcca	tctctcaacg	cctgaagctc	accgcacctc	60
ccctcctcgc	cgcggatccc	ccactactcc	ggtagaaaat	ggctgacgct	gaggatatcc	120
agccccctcg	ctgcgacaac	ggaactggca	tggtcaaggc	tgggttcgcc	ggcgacgacg	180

ctccgagggc cgtcttcccc agcatcggtg ggcgcccgcg ccacaccggt gtgatggtgg 240  
 ggatggggca gaaggatgcc tacgtcggcg acgaggcgca gtccaagagg ggtatcctga 300  
 ccctcaagta ccccatcgag cacggaatcg tcagcaactg ggacgacatg gagaagatct 360  
 ggcacacac cttctacaac gagctccgtg tggctcccga ggaacacccc gtcctcctca 420  
 ctgaggcgcc cctga 435

<210> 3829  
 <211> 461  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-052-Q1-E1-B3

<400> 3829

ccggtctaga attagcgggt cgacccacgc gtccgggcgt cgccttcgtc ctcggccatt 60  
 gccacgtcgc cgcagcatgc cgttcttggc gccaggctgg cgaggagcca gtcgtcgtctg 120  
 gcttgctgga acgccgccgg tctcggccgg cggcgcggcg gggagcacac gatcaggcgc 180  
 gctctcagcg cgagcatcga cagcgtcggg agcgacggcg gggacgacga ggagttctcg 240  
 aggaggatcc aggagctcgc ggtgggtcag caccggggcg ccggcggtcg cnggtggccg 300  
 gcgagcgtgg agcgagcgc gagcagcgtc gggctgccgc tgtcnctgcg gatgctcaaa 360  
 cggaggaagc agcagcagct ggagcatggg cgggtgggacg agcggctggt cgacagcgcc 420  
 ggcgagtctg cgcgcgccgc ggtggggcgc gccttctcct c 461

<210> 3830  
 <211> 460  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-B4

<400> 3830

ggtccagaat acacgggtcg acccacgcgt ccgcgacggg gccaaaggccg acatctggtc 60  
 ctgcggcgtc atcctcttcg tgctcctcgc cggctacctc ccgttccacg acgccaacct 120  
 ggtggagatg taccgcaaga tcagcagagc cgacgtcaag taccgcaggt ggttctcccc 180



tgagctccgg cggttgatgc ccaagctcct cgaaccgaac ccaaacaaca ggatcacgat 240  
 cgagaagctg gtcgagcacc cctggttcaa gaaggggtac aggccggccg tcatgctggc 300  
 acagccgcac ggctccagca gcctcaagga tgtccaggtc gccttcagca acgccgacca 360  
 caaggacagc agcaccaagg tggaacagcc ggcgagacgc tccttgaagc cggcgagcct 420  
 gaacgcgttc gacatcatct cccactccag aggggttcga 460

<210> 3831  
 <211> 437  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-052-Q1-E1-B6

<400> 3831

ccacgcgtcc ggcgggaaat gccggcgggc gcggccatga cgacgaggcg ggtgggtgctg 60  
 gaggtgctac ggtcggcctc ccgcgacgcc ttccagggtg ccttctcctt cgcggcgagg 120  
 ccgcccgtgt ccacatgct caagccggcc atcaccaagc ccctctacca ccaccaccac 180  
 gacaacgact aatctggcgc agatctacag cacggccgtc ggcatgcctt cacagcccgg 240  
 tgggtgtgac gactattgat gacgtactac cacatttcgt cgctcctatt ctagtaagca 300  
 acgcanaaga aaatgttgta agattgagcc tgagagcttg agtcaccaat gtaaattgta 360  
 tacgactgac tatatataga gcatgctctg taaccatata tattgcccgg gcccccttg 420  
 ccctcgcaat ctatgct 437

<210> 3832  
 <211> 425  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-B7

<400> 3832

ccacgcgtcc gccacgcgt ccggtcctct cctctgtccc tctacggtgc ttctgctcgc 60  
 cggcccaaaa tcgcctcatc gaccacgcc ccttcaggc tcccgtctcc atgggtctcc 120  
 tctcaaacag gattgggagg gagagcctca aggcggggga tcatatctac tcctggaggg 180  
 cggcgtgggt ctacgcgat cacggaatat atgtgggcga tgataaggtg atccatttca 240

caagaggaag aggacaggag gtcggaacag gaactgtcgt cgatattatt cttgtgagtt 300  
ccaccccaaa acgaagcaac acgccttgcc cgggtgtgcac cgacgaaacc agcgacagca 360  
gcacagagac gaacggcgtg gtatcctcct gtctcagctg cttcctagct gggggtgctc 420  
tctac 425

<210> 3833  
<211> 375  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-B8

<400> 3833

ccacgcgtcc gccacgcgt ccgcctgaaa ccagcgtgct gtgccgcccg ggacgatggc 60  
gccgcgccag ccgctgctcc ccagtttctt ctacgcggcg tcgtccggcg tcaacggcag 120  
cagggaggcg cctccggtgg tggcggggcg cccgagcgag ccgctcggca agatcgagat 180  
gttctcggcc gcatactacg cagcggggcg cttgggaggc gccgcggcct gcgggttcac 240  
gcacgccgcc gtcacgccgc tcgacgtcat caagtgaat atccagatcg accccgccaa 300  
gtacaagaac acctcgtcgg cgttcagcgt ggtgatgagg gaagcaggcc tccggggcgt 360  
ctacaggggg tgggc 375

<210> 3834  
<211> 449  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-C1

<400> 3834

ccggtcaaga attatcgggt cgaccacgc gtccgccac acgtccgatc aagccagaca 60  
acttccttat aggcttaggt cggaagcta atcaggctta tatcattgat tatgggcttg 120  
ctaagaaata caaggacctt cagactcata aacacatccc atacagggag aacaaaaatc 180  
tgactggaac agcacgttat gctagtgtga atactcatct tggaatagaa caaagcagga 240  
gagatgatct ggagtctgtt ggctatcttc tgctatattt tttaagagga agcctcccat 300  
ggcagggcct taaagctggc actaagaaac aaaagtatga taaaattagt gaaaagaaaa 360

tgcttacctc ggcagagatt ctgtgcaaatt cttacccgcc ggagttcgtc tcatatttcc 420  
actattgtcg ctccctgcga tttgaagac 449

<210> 3835  
<211> 446  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-052-Q1-E1-C10

<400> 3835

cggctctagaa ttcaccgggt cgacccacgc gtccaccac gcgtccggca gccgtggccg 60  
ctctgctggt gttcgccgcg gtgtcgctg ccgcgcgcgc ggtggcggcg gaggcggagg 120  
cgaaggcgaa ggctgtggga ggcgcgccgt cggtgcccgc tggctcgctg gacatcgcg 180  
agctgggcgc caagggcgac ggcaagtcgg acagcaccac gatggtgctc aaggcgtgga 240  
agcacgcgtg cgaggcgacg gggcagcaga agatcgatcat ccccaagggc aactacctga 300  
cgggcgcgct ggacctggtg ggcccctgca agtcctccat catcatccgc ctgcacggca 360  
acctgctcgg cancggcgac ctcaacgcgt acaagaggaa ctggatcgag attcagaacg 420  
tcgacaacct gtccatcaac ggccac 446

<210> 3836  
<211> 100  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-052-Q1-E1-C11

<400> 3836

gacgcacgcg tccaaaataa atcatattaa aatnaacaa tcagaaaaaa aaaaaaagg 60  
gggggcgccc caaaaggatt caagcctacg ttagccttga 100

<210> 3837  
<211> 438  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-C2

<400> 3837

ccacgcgtcc gcggtgctgc cggacacggc gttccaccag gtgttcatca ccccgggcgg 60  
cgtgatccac ctccgcgacg gcgccaactc gcagtacgtg accagcacgg cgttctctgct 120  
ggtggtgtac gcggacctgc tgctgcggaac ggggcagacg gtgctgtgcg ggaaccagcc 180  
gctgcccccg gcccggttgc acgagttcgc gcggcagcag atggactacc tgctgggcgc 240  
caaccgcggg cacagctcct acgtcgtggg cttcggcgcc aaccgcccc cgcagccgca 300  
ccaccgcggc gcatccaccc ccgtgctgcc ccccggcacg gacgtcaact gcggcctcag 360  
cttcggggac tggatggcgc ccgacaagcc caacccaac gagctcaccg gcgccatcgt 420  
cggcggggccc gacaagaa 438

<210> 3838

<211> 459

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-C3

<400> 3838

ccggtcaaga attatcgggt cgaccacgc gtccgctacc ctcgctcgctg tcgcactcaa 60  
cccgcttca cgctccctc accaaataat gtcccgccct tttccgacat tcacaggggg 120  
gacaggaaat cagcggccat ggctcgtatt ccggcgacga ccttcgccgt catcttatcc 180  
gtcctcttct gtgccgaggc tggcaccgcc gtgcacaacg acctccccga ctacgtcatc 240  
cagggccgcg tctattgcga cacctgccgc gccgggttcg tgaccaatgt caccgagtac 300  
atcgcgggcg ccaaggtgag gctggagtgc aagcacttcg gcaccggcaa gctcgagcgc 360  
tccatcgacg gggtgaccga cgggaacggc acgtacacga tcgagctcaa ggacagccac 420  
gacgaggaca tctgccacgt ggtcttggtg gacagcccg 459

<210> 3839

<211> 355

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-052-Q1-E1-C4

<400> 3839

cggtccagaa taccgggtcg acccaacggt cggggcgagg gccacggctt cgccgtcgac 60  
tgggtgggccc tcggcgtgct cgcctacgag atggcggttcg ggcggaacgcc gttcaagggc 120  
cagaaccgca aggagacgtt ccggaacgtg ctgcagcagg agctcgagtt cccggggggac 180  
acccggtggc ggacgccgga gctcgcggat ctcatctcgg gcctgctgga gcgggacccg 240  
aggaggangc tcgggtacgc cggccgcgcc gacgaggtcc gggcccaccc gttcttcgcc 300  
ggcgtcgcgt gggacatgcc cagggaggtg tccaggcccc cctacaaccc gccgc 355

<210> 3840

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-C5

<400> 3840

ccacgcgtcc gctttcgagt gcgtgcgtgt ctgttcaagc tctgatcgtc tctccggccc 60  
attcgccgga ggaaactgac cgccgccttc tcgctctcgc tctctaccct attcccgggg 120  
ctgagagggg aggagagaag gccacgtcca caccataaag caggacgtac agacacgtgt 180  
acgaggggga tcacggtcgg gtgaggtgac taagctggcg gacggaacga cgacgatggc 240  
gaggagcggc ggcgggatgg aaggcagcgg cgggctgaag aaggggccgt ggacgcaggc 300  
ggaggacaag ctgctgaggg accacgtgcg gcggcacggc gagggcaact ggaacgccgt 360  
gcgccgggag acgaggctgc agcgtgcgg caagagctgc cgtctccggt gggccaacca 420  
cctccgcccc aacctc 436

<210> 3841

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-C6

<400> 3841

ccacgcgtcc gccacgcgt ccgggagaac cagcagcctc caataagagc cagccagaga 60  
aactaataaa actctcaccg ccgccatccg agagaacaag ccaaccgacc ccgtcccca 120

ggcaatccgt cgccgacgta ccaccgccac cgcaggagcg agatggagat gaagaggatc 180  
ctcttcgccg tcctcgtcgt catcgccgcc tcggccaccg cagtgtctggc ctccaccgag 240  
gccgccgccg cgggcgcccc aactgcctcc gagtcgtccg ccgaggctcc cgctggcgct 300  
ggcgctggcg ctgccgtgg cgccgcgcgc gccggggccct ccgccagcag cggcgcgccc 360  
gccctcgccg ccgcgcccgc cgcgctcctc ttctccctcc tcgcctacta cctccactaa 420  
gcgtgtgcgt g 431

<210> 3842

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-C7

<400> 3842

ccacgcgtcc gaaagaagtc gcctaattct ttcgatcgaa ttaggcgcct tcttcgtccc 60  
acgctccgtc tttatttgta atgtgaagct tacaggaaca tttgagtgga tcatggacgg 120  
attggtaggc ctcttgaaag tccgggtggg gaggggcac cactttgcct accgcgacgc 180  
aagaggcagc gatccgtatg tcgtcctacg acttggaag aagaaactta agacgagcgt 240  
gaagaagaga tctgtgaacc ccactctggc cgaggagcta actctgaccg tcacagatcc 300  
cagcctagct ctgaagctgg aggtgttcga caaggacacg ttcagcaggg acgacccgat 360  
gggggacgcg gagatcgacg tggcgccgct ggtggaggc 399

<210> 3843

<211> 392

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-C8

<400> 3843

gccgccaggt accggtcctg aattccggtt cgaccacgc gtccaggaaa acttgaaatc 60  
agcaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaataaaaaa 120  
taaaagaaaa aagaaaaata taaatataaa aaaaaaaga aaaaaaatca tttaaaatag 180  
ttaaaagagg tgaaggagat ggatttttaa gtaaagggat cgaattggaa gtctgataaa 240

aaagtcttca gcgttggcta cattggtgtg ttagcggatg ggggtgtgctt ggattttctg 300  
 gggggggggg cttcgtaggt ttcattgttt tttgcgggtg tgggggttatt gtggggggtg 360  
 ccgtgggggg ttttgcggtc aagccgtggg gg 392

<210> 3844

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-D1

<400> 3844

gggtcgagcc acgcgtccgt gcagctgctg gccgccggcg tggccgtgct actgctagtg 60  
 gcaccgccgg ccttggctga cgacgacatt gtagaagtcg gcgtcaactg gggttcgcag 120  
 ctctcgcacc cgcttctccc eggtccgtg gtgaagatgc tcaaggcgaa ccgcctcgcc 180  
 agggtaaga tggtcgacgc cgactcctgg cccgtcggcg cgctcgtcga ctccggcatt 240  
 gaggtcatgc tcggcatccc caacgacatg ctggagacca tgagcagcag ctacggcaac 300  
 gccagcagatt gggtaagga gaacgtcacc gcctacggtg acaagcttaa gctcaagtat 360  
 gtggcagtgg ggaacgagcc atttctcaaa gcatacaacg ggtcattcat gaaagacaac 420  
 cttcccggcg ctcaagaaca 440

<210> 3845

<211> 438

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-052-Q1-E1-D10

<400> 3845

cacgcgtccg atcaaagcgt acgaggacgc cgctccgtg ctacccgtct ccaagatcca 60  
 ctacgagaat atcaagatgg aggactcagc caaccccatc ttcactcgaca tgaagtactg 120  
 ccccaacaag ttgtgtaccg ccaacggcgc ctccaaggtc accgtcaagg acgtcacctt 180  
 caagaacatc actggcacct cctccacccc ggaggccatt agcctgctct gcaactgcaa 240  
 ggtcncatgc accggcgtca ccatggatga cgtcaacgtc gagtatagcg gcaccaacaa 300  
 caagaccatg gctatatgca cgaacgcaa gggcagcacc aagggttgcc tcaaggagct 360

tgcattgcttc tagaccctcc gtcgactgac ncatctctct agttataatt tttctctcgt 420  
ccttgcatg catattag 438

<210> 3846  
<211> 233  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-052-Q1-E1-D12

<400> 3846

gtcaagaatt cacgggtcga cccacgcgtc cagttcctct cccccctggt tgtatggaag 60  
attaccaata tgcagcgatt ttctcgcaaa gaaggagctc aatgcacatg cttgtttgtt 120  
cacattcctt tttctgctct gagtttctgc tgatgcatgt gtacgacagt gtaatttgat 180  
gtttgtccac gctttcgagc taaggcttta atctaaaata tcttctattg ttt 233

<210> 3847  
<211> 401  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-D2

<400> 3847

gggtcgagcc acgcgtccac ccacgcgtcc ggcgggcgat cgaggaggtg gtcgtggcgc 60  
agtcgcgggt gcaccggtgc gcggcggtccg tggacttcgg cgccggtggg agcccgtgc 120  
tgcccccgac cgtgaacgcc gcctcgctgc acgcgcactt cgaggccgct gccgccgaca 180  
cggtcggcgc gggcgccgct cgtggcgcca tggagccctg catgggcagc gaggacttcg 240  
cgtccttctc ggcgggcgtc cccgcctcgc acttctactt cgtcggcata gggaacgagg 300  
cgatcggggc cgtgcacgcc gcgcactcgc cgcactttct tgtcgacgat ggtgcgtcc 360  
cgtacggcgc cgcgatgcac gccaacctcg ccatcgagta c 401

<210> 3848  
<211> 408  
<212> DNA  
<213> Zea mays



<223> Clone ID: LIB148-037-Q1-E1-G4

<400> 3848

cacgcgtccg ggaccaggaa cggcaccgtg gtcagctacg accgccgctc gctcatgac 60  
gacggccacc gggaaatctt cttctccggg tccatccact acccgcgag cccgccggac 120  
atgtggcccg agctcatcgc caaggccaag gagggcgggc tcaacacat cgagacctac 180  
gtgttctgga acatccacga gcccagagaag ggtgagttca acttcgaggg gcagaacgac 240  
gtggtgaggt tcttcagct gatccaggag cagcagatgt acgccatggt ccggctcggg 300  
cccttcatcc aggcagaatg gaaccacgga ggactgccct actggctaag ggagatccct 360  
gacattgtgt tccggacgaa caacgagcca tacaagatgc acatggag 408

<210> 3849

<211> 436

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-G5

<400> 3849

caggtctgga actcgcggt cgacccacgc gtccaaatca agcacctcca cctccccgc 60  
cggccaacaa ctacgccgc gcaaccgcca catcagccat gggcgctgc gcaaccaagc 120  
ccaagacgct tgaggggcag gcccagctg aggcgcgct ctccacaccc aaggttgcc 180  
ccgaggccac tccaatctcc gttgaggttg cggctgatga acaggtagct gagaaggtgg 240  
tggtggagga gccggtgcg gcggccgacg ttgagcatca gaaggctaag gaggtggtcg 300  
ctccagaggc ggccgtcgcc gagcccgatc acaagganga ngaagccgtg gagaagaccg 360  
tcgtcgagga agagaagcca gcggcagccg ccaatgcaga ggacaaggtc gccaccgccg 420  
ccgagaccac gacgac 436

<210> 3850

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-G6

<400> 3850

ccacgcgtcc gcggaacgct gggcggacgc gtgggttcgt ggatgccggc gccacagcct 60  
ctcctgctgt cgctgctggt cgccgtgcta gcggtggccg ccgatgtcgc caacgccggc 120  
cacgccaagc ccctgacgcc tggcggggcg gtggtacacc acaaccacgg caagttcacg 180  
gccggggcgt ggaaacccgc ccacgcgacc ttctacggcg ggcgggacgg gtccggcacc 240  
acggcggggc cgtgcgggta caaggacacg cgcgcgcagg ggtatggcgt gcagacggtg 300  
gccgtgagca cgggtgctgt cggtgacggc gcggcctgcg gcgggtgcta cgaggtgcgc 360  
tgctgggaca gccctagccg ggtgcaggcc cagcgcgggg acactggtgg tgacggcgac 420  
cgacctgtgc ccgcccaacg a 441

<210> 3851  
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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-G7

<400> 3851  
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gccaatgta agaccatcgt cgcagcagtc ctcgtggttg ctctcgtggt ttcgacgac 120  
ccagccagcg ccgatacgaa cctggaacct gcaggaggct ctacggaggg cagtgcccg 180  
acctccggca tgcagaagga agagaccga ggcaacaaga agccagcgac gtcgctgga 240  
tctcttggtt caggcaagaa tgccatctac gggtaaatga ttagaaggaa tcctgcttcg 300  
gaaggtatga aaacaatggg gatgtgctca acaatcaatc tcaacccag gtgacggcaa 360  
tgagtcaccc acaggaatgt aaccggatat agatggacat tgctcgttcc atatttcttt 420

<210> 3852  
<211> 404  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-037-Q1-E1-G8

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cctcgaacgc cagggttcctt ggaccactat atccaggagc gacgaagtga tccacccgcc 120  
agccatggag atgaagaagg tcctctgcgc cgccctcgtc gccgccgctt cggccaccgc 180  
cgtgctggcc tcggtcgctt ccgaggcgcc ctccgaggcg cccgccggcg cggccggtgg 240  
tgcggtggc cctagcgcaa gggcgccgc cgccgccgc gtgcccgcg cggggcgct 300  
cgtcgctcc ttctcgctt actacctca ctgagcgagc acgcgcgggg cggcaacgtt 360  
gggatgcac gtgtntggtt catccgatta attaattggt tttt 404

<210> 3853  
<211> 436  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-G9

<400> 3853  
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tctgataggc aacccaataa tggcagaagt cctatcatga tctcatgaac actgtctaag 120  
ctctgcctta gatggacact acgacgagaa caggatatcc aatgtggaat acacagatga 180  
cgacaagaaa gccgtgatcg cggctctgaa aaagaaggct ttgatcgctt cacagaagtt 240  
tacgcattcc atgaacacgg ggatgaagag cagcaacgtg atgtccatct cgattctgga 300  
tgagcgtgaa cctgaggagg tgcacgctgt ggatgccttc cgccagcttc ttgtacttga 360  
agagctgcta ccatcgagc atgatgacta ccacatgatg ctaagatttc tcaaggcaag 420  
atagtttgat atcgag 436

<210> 3854  
<211> 421  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-037-Q1-E1-H10

<400> 3854  
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ccaaagcttg cagagacttc ctcggtccat cagggcattg ctagagctta gatgcctttg 120  
tctctatgga acttcnctaa gctatgtacc aaagggtggt ggtaaattga agcatctcaa 180

tcattctagat ggttataatca ttggtcatga caacaatgcg cctgaggggtt gtgacttaga 240  
 tgaccttaaa gcattgtcag aactaaggca ctttcatata aagagtttgg atanggctac 300  
 ttccggtgcg tctgcactcg caaacaagcc attcctagag gatctgtacc tctctgagca 360  
 agcaccagca atagaaaatc aggaggatct ggangacaaa gatgaaacag aaaaagaaga 420  
 g 421

<210> 3855  
 <211> 436  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-037-Q1-E1-H2

<400> 3855  
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 agccccagct gaggccacca tctccacacc caagggttga cctgagacca ctaccatcca 180  
 cattgaggtt gcggcaaaac atgcagtagt tgagaaggtg gaggaggaca aggaggaggc 240  
 actaacagtg gcggcgaaac aagagccagc agccaccatt gagcctcagc agattgctag 300  
 tgaggtgacc acttcggaag tggcggtcgt cgttgtcgag cctgagaaca aagaggagga 360  
 ggaagttgtg gagaagaccg tcattcgagaa ggagaagcca tcagcagtcc atgcaganga 420  
 aaatattgcc cacaac 436

<210> 3856  
 <211> 419  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-037-Q1-E1-H3

<400> 3856  
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 gccagtcgtg cccgcgcgcg gagaggatca tcgcggaggt gatgcagacg aagcagatgg 180

cgaacccgac gacggccgcg ggcattgctgc gcgcttttctt ccacgactgc ttcgtcacccg 240  
 ggtgcgacgc gtcggtgctg atcgcgtnc a cccagttcca gaagtcggag caccgacgcg 300  
 agatcaacca ctgcgtcccc ggggacgcct tcgacgcctt ggtgcgcgcc aagctggccc 360  
 tggagctgga gtgccccggg tgggtgtcctg cgccgacatc ctgcgcctgg cgtcggggg 419

<210> 3857  
 <211> 131  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-H4

<400> 3857

cacaccctat agtgagtcgt attaaactgg tcgcgctcac ggtgcgcgcc ggggcccagc 60  
 aagtgcctac gtgtagccgc agctccctgt acacggacta ctacagccag tcatgggagc 120  
 gcgccgacag g 131

<210> 3858  
 <211> 422  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-037-Q1-E1-H5

<400> 3858

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 gggaccggaa gcatcagcca tgtcgaactc ggcgtcggga atggccgtct gtgatgaatg 180  
 caagctcaag ttccaggagc tcaaggcaaa gaggagcttc cgcttcatcg tgttcaagat 240  
 caacgagaac gtgcagcagg tgggtggtgga caggctgggg gggccaggag agagctacga 300  
 cgccttcacg gcttgcctcc ccgccaacga gtgccgctac gccgtgttcg attttgactt 360  
 cgtcactgac gagaactgcc anaagagcaa gatcttcttt atctcttggg ccccgatac 420  
 at 422

<210> 3859

<211> 440  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-037-Q1-E1-H6  
  
 <400> 3859  
  
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 cttcaatccg tccggcggcg cccccaagca ggtcgacacc aacgagtggg taaagcccaa 120  
 gccaggaacc tacgttaciaa ggctcacccg cttctccggc aactgtcctt gctgcacggg 180  
 caagccgtgc tgaaggccgg tgggcatcag gctgcttctt ctagctcatg gcctggccat 240  
 gccaggctgc gctggctgcg tttcatttca tggaagaaag caaggatgga tcacaggttg 300  
 tcgttctgct aattaatcta catacgtttg ctttcaagta ctgtgttggt gcattgttac 360  
 acatcacagt acagtttggg caaatttttt ttccacagag gaagtangga ttgatttaat 420  
 cattgattta atcccacacg 440

<210> 3860  
 <211> 426  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-037-Q1-E1-H7  
  
 <400> 3860  
  
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 gtgagctcac caccacctcc agtgaagtct cctccgccac cagcaccagt tagctcccca 120  
 ccacccccaa taaaatctcc tcctccaccg gcaccagtta gctctcctcc accagcacca 180  
 gtgaagccac catcactacc accaccggcc ccagtaagct cacctcctcc ggttgtcacc 240  
 cctgccccgc cgaagaaaga agagcagtca ttaccaccac cagcagaatc ccaacctcca 300  
 ccatcattca atgacatcat ccttccacct atcatggcca acaagtacgc atctccgcct 360  
 cgcctcagt tccaagggtta ttaagcgcca cagagacatg gttgatgaag catgaaagga 420  
 acagtc 426

<210> 3861  
 <211> 414

<212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-037-Q1-E1-H8  
 <400> 3861

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 gcagcagggtg gccgcccggg cgcgggaggg cggcgtgggc ctggccggcg agaacgcgct 120  
 gccgcgctac gacgacacgg cgcacgacca ggtggtggcc actgccgcgg acagggccgc 180  
 cgaggaccgc atggtggcct tcacgtacct gcgcatgggg cccgacctgt tccagcccga 240  
 caactggcgc cgcttcgccg cgcttcgtcaa gcgcatgacg gagccggggc cgcgggaggg 300  
 gtgccgggag cagggtggagc gggaggccga gggcgtcgcg cagccacccc agcccctcgt 360  
 gcacgaggcc gccgtcgcg tcnacaactg accggaccgg ccggcggttcc ccgt 414

<210> 3862  
 <211> 435  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-037-Q1-E1-H9  
 <400> 3862

gggtcgacgc acgcgtctaa gataatccac acgaggacaa ccttgtcacc accggcaagg 60  
 gaaagctcga cgggcagggg ccagccgtgt ggagcaagaa ctctgcgtc aagaagtacg 120  
 actgcaagat ccttcccaac tcgctggtga tggacttcgt gaacaacggg gaggtgtccg 180  
 ggatcacgct gctcaactcc aagttcttcc acatgaacat gtacaagtgc aaggacatgc 240  
 tgatcaagga cgtcaatgtg acggcgcccc gggacagccc caacacggac ggcattccaca 300  
 tgggcgactc gtccggggtc accatcacca acaccgtcat cggcgtcggc gacgactgca 360  
 tctccatcgg ccccgggacc tccaagggtga acatcaccgg cgtgacctgc ggccccggcc 420  
 acggcatcag catcg 435

<210> 3863  
 <211> 419  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-A12

<400> 3863

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tcccgcacatc atcgccgggtt tcgagagtga ggttgctgag gctgcaaattg aagaacagaa 180  
aaccgagagc ctgatgagge tctcctgggc gcttggtcac tctagacagc ctgaagatgt 240  
caaccggggc atcggaatgc ttgaagcttc attggacagg tctagcagcc cagaggaaac 300  
aagggagaag ctctacttgt tagctgttgg tcgttacaga actggggatt atacaagaag 360  
ccgacagctt ttggaaagat gcttagagat ccaacatgac tggagacaag ccataactt 419

<210> 3864

<211> 442

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-A3

<400> 3864

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agagctgtct atgccacttg ctgctgtgaa gtactcccggt gggacgttca tctttcctgg 120  
cgcacagcca gccccccaca ggagcttctc tgaggaagtt gctgcactta accgctactt 180  
tggcggcctg aaatctgggtg gtaatgctta tgtgattgga gatccagcaa gacctggaca 240  
gaagtggcac gtcttctacg ccactgagta cccagagcaa ccaatggtta accttgagat 300  
gtgcatgact ggtctggaca agaagaaagc ttgtgtcttt ttcaagacta atgctgatgg 360  
gaacacaaca tgtgccaagg aaatgacaaa gctctctggc atctctgaaa tcatccccga 420  
gatggagatc tgcgattttg ac 442

<210> 3865

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-A4

<400> 3865



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gcagtcctgc agtccttgcc aaggcaccgc agtctgctgc cacgagaact gccccgcta 120  
aggcacctca agccgcctcc acccccgccg ttgccgctgc cccatcgctg tcgtcgtcta 180  
agaagtctgg tccagctgcc ggcgcgacca acgccgcctc tacaccgtct tcttccacgg 240  
acgaggagtt gagcccttcc ccgtcgccat ccaccgccga ggtggcgctc cctgccgctg 300  
atgggcctgc tgagggaccg gcggtgctg atgcctccgg tgctgctacc cttggaagcg 360  
gagctgccat cgctgggtgc gccgctgctg tcgtaccat gatcttctac tgagttcacc 420  
a 421

<210> 3866  
<211> 392  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-038-Q1-E1-A5  
<400> 3866

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gtctgtcatt cctcgtgtac agaagaagct tagtgcctaa cacatgaatt aacggtacac 120  
tgaatctatc acatgtctcg cctatatatg ttctgttggt ccgtccatcg acttggacat 180  
tttggaaacc acaaaccaca cagagcaata ctgaaaaaaaa tgtgggttta cagagaaaaa 240  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aagggggggc cccccaaaag gttcaaagct 360  
tacttacct tgaaggcaag ttcaaagccc tt 392

<210> 3867  
<211> 416  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-038-Q1-E1-A6  
<400> 3867

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cattagcatt tctggtaggc ggtgcctggt gtggtcctcc caaggttccc ccgggtaaga 120

acatcacagc caaatatggt agtgattggc tagatgccaa ggcgacatgg tatggcaagc 180  
cgacaggtgc tggccccgac gacaatggtg gcggctgcgg gtacaaggac gtgaataagg 240  
cccccttcaa tagcatgggc gcggtgtggca acgtcccat cttcaaggac ggtctaggtt 300  
gtggatcctg cttcgagatc aagtgtgaca agccagcggg gtgctctggc aagcccgtgg 360  
tggtgtacat tacggacatg aactacgagc ccattgcggc ataccacttc gaccta 416

<210> 3868  
<211> 414  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-A7

<400> 3868

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agttagatct actgcagcca gccttttgcg agcagccaca gcggtggcgg ccgcgccggc 120  
gtcggcttca cgctcatggc tcgtgcccaa cgaagctcaa gacgagctca tgcttgtgat 180  
cgtcaagcaa tcacgtcgtg atccgatcat tttgtggctc aggggaaggcg ttgtaggaat 240  
gcagtgcgac tgatgttgtt gttcattgcg cgggtgcgtaa ctacgctggc tgagagatta 300  
gaatgacatg ttgccagtac attacaagcg ctctgtctg atctctgttt cagaactagt 360  
ttgggaaatg taagatgaga ccgtggacgc caatgtttca gatcctcctc cttt 414

<210> 3869  
<211> 419  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-A8

<400> 3869

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cggcgccaat tgaactaacg acgacgtacg tgcgaccggg ccgggcggtg gattattccg 120  
gcctgagcaa tgggcaagat cgagtacggc gtggtggcgc gcggcgcggt ggtgctggcg 180  
gagcactacg gcgcggcggc ggcgggcggc aacgcgggcg ccgtggcgcg gcaggtcctg 240  
gagcgtctcc ctggcggcgg cgacgacgac tgcaacgtgt cgtacacgca ggacctccac 300

gtgttccacg tcaagcgcac cgacggcctc acggcgctct gcatggccga cgacgccgcc 360  
 gggcggcgtg tccccttcgc gttcctggag gacatccacg ggagggttcgt caaggcgta 419

<210> 3870  
 <211> 153  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-A9

<400> 3870

atagtgagtc gtattaaaac gtgtgacata gggcgatccc gatcgtcggc cggcacgtct 60  
 tgcgctagcg accagttacg tgcaacctcg ccgggcgttg cgtcactcgg gtctgattaa 120  
 tgcgcatggt ccattacggg gtgtcggcac gcg 153

<210> 3871  
 <211> 433  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B1

<400> 3871

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 ggggatgcag atgatgcagg tgcagcaggc ggccggcgttg ctgctgtgct tggttgtgtt 180  
 ggcggcgtct acgcgggtcg cgctgggcaa ctgccgcgac gactgcatgg ctgcatgcaa 240  
 cggctggacc atcgtctgcc agctctcctg tgccagcgca tgctacggag aagtcgggat 300  
 cacaacctta ggtacgtcgg ctgtattagc gaaagcagaa gcgcctgcat cagcaccaca 360  
 agcagcacia gagcgaggcg ccgccgccgg cgtgtccgcg ctgagagggt tcaagctatc 420  
 atcaccgacg acc 433

<210> 3872  
 <211> 413  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B10

<400> 3872

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tccggcaacc tccgcggccg tggcggcggc gagggccgat gacgccctgc gccagcgccc 180  
gcgggggctc gtgcaggtcc gggagcggga ccagggcccc ctgtcgacgg ggcaccagca 240  
cctgcaccac catcaccacc agctgcggcg gtcggcgggc tccccacccc gccgcccggg 300  
gccggggcgc cgccctcctc agcgtcgcga aagcgacctc aacatcaggg agcaccgctc 360  
ctgcagcgag gtggccggcg gcaccgcggc gggctgcgcc gctgtgtgct gct 413

<210> 3873

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B11

<400> 3873

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cactaatgag gaagctgttg ccatggtcaa gcctattcag gacccccagg aagcagcaaa 120  
caagcttctc gaagaagcgt cccgaagggg aagctctgat aacatcaccg ttgtcatcgt 180  
ccgcttccta tatggaacta ccggtgataa atcaggcgca gacaaagaga ccaccaatga 240  
ccaaaactcc taattacctc ctgtagggat ccctcatgcg tgtgttttct tctggctgtt 300  
gtatctgatg ctcaaagtag atgctccgtg tgtcttcgcg tgctgttccg caaggaaact 360  
gactcccccg accgtcgtcg tgatgctgcc cgctcatgct cctaaacggg aatgactgcc 420  
gcagaatgac gaat 434

<210> 3874

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B12

<400> 3874

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 tgttggggcg cgtgcccgc cggcccccg ccaccatgcg tcgtgtctgc gcgcgcacgc 180  
 acgcattgaa cgggagatag aatatggtat cgttcaatgc agattgccat gctatagctc 240  
 cagagtttat ctacctggtg gcaccatgac acgatggccc gtctgtatctt tctggcttgc 300  
 tcgtactttt cagttccatg gttttacaac accttttact cccagcagaa aatacataat 360  
 atgcatggta ctctctttt ttttccgtat agtaataataa acaaattttc a 411

<210> 3875  
 <211> 416  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B2

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 gatgcagggtg cagcaggcgg cggcggttgc gctgtgcttg gttgtgttgg cggcgtctac 180  
 gcgggtcgcg ctgggcaact gccgcgacga ctgcatggct gcatgcaacg ggtggaccat 240  
 cgtctgccag ctctctgtg ccagcgcgtg ctacggagaa gtcgggatca caaccttagg 300  
 tacgtcgggt gtattagcga aagcagaagc gcctgcatca atcaccacaa gcaggacaac 360  
 aacgaggggc cgccgccggc atgtccgcgc tcagaggggt caggcgggtca tcagcg 416

<210> 3876  
 <211> 440  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B3

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 ggcggcaaaa agaagcccca cgtcaaccac ggcaagttaa aggcggagcc gtggacggac 180  
 gggcacgcga cgtactacgg cgggcgcgac ggggttaactg acaccacgga cggcggcgcg 240

tgccggctaca aaggcgagct ggggaaagac tacggcaccc tgacggcggc cgtgggcccg 300  
 tcgctgtaca ccaacggcac cgggtgcggc gcgtgctatg agctcaatgg ccccaaaggc 360  
 accgtggtgg tgacggccac caacgatgcc ccgccgccgg tgagcgggca aaaaggcgag 420  
 cacttcgacc tcaccataac 440

<210> 3877  
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 <213> Zea mays  
 <223> Clone ID: LIB148-038-Q1-E1-B5  
 <400> 3877

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 gaaacttcac aaaaaatacc tgaaaaaggt acaagcaaag aaaccttaaa cgtgccatgg 180  
 aacacacgtc cccaatgggg ctatcggtac catttcaaca tacacgacca ttttctacac 240  
 acaactttga gtgaagattt atcggacaca ggtggtaatc gtctgacatg tcttgagata 300  
 cacggagact gatggtgccg ggctagtggt ttgagtacag gatgagcgca accggtagtg 360  
 tgtatatcac gttctttgta ctcaagaatt ttgtacagac agaaggcggg gcggatagca 420  
 tgccttgcac acataat 437

<210> 3878  
 <211> 417  
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 <213> Zea mays  
 <223> Clone ID: LIB148-038-Q1-E1-B6  
 <400> 3878

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 ccttgacagg gacttcaacg ccaagctctc cgacttcggg ctgcgcaagc tgggccccat 180  
 gggcgaccag agccacgtca gcaccagggt catgggcacg tacggctact gcgccccga 240  
 gtacgccatg accggcaagc tcaccaagat gtcggacatc tacagcttcg gcgtcgtgct 300

gctcgagctc atcacccggcc gccgcgccat cgacgtcacg aggccgtccg aggagcaggt 360  
cctcgttcag tgggtgagct gagcttttcg tttcgtttcg ttacgttttc caccagc 417

<210> 3879  
<211> 452  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B7

<400> 3879

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cttggctttc ccggcccggg tccccgttgt gggtttcogg aaccgccttg ggcttaagaa 180  
ccaaggtatt cttgtggaag acatatcctt cgctcgcgca gacaatttcc tggcaattcc 240  
ccagtggggg ctaatgtctg gtggaactac actcctgctc atgtacatga gcaacatcgt 300  
ctattttcac aagctcacc cttcttttta tgggtgtgct cgctcggaat aactaaccaa 360  
ccgggtggag gtattcttcg cgccgtggat cgctgcctc ttcctcgcca tcggcgtgcc 420  
gccgtccgtt gccactgagc cctgcccga gt 452

<210> 3880  
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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B8

<400> 3880

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catgggtatg gatatgggac aaaatctcca ccattgggt aaacgggtat gggtttggga 180  
agcaataatc cgaaccgat taccatggg tatttcatac gcgtacacct gtcctgtttg 240  
tatgaatgag ttgaggcca gtcggccatc aaacccgga ggctccattt cttatattgg 300  
tccaagtac tgatttctt tctgatggat ggatgaatgg ataatggttc atgg 354

<210> 3881

<211> 410  
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 <213> Zea mays  
  
 <223> Clone ID: LIB148-038-Q1-E1-B9  
  
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 gcatcatttg cttctaaagc ttgaaactaa tgattacaaa agaagggaaa aagaagtact 180  
 agaggaagag aagcgcgatgc aaacatactc tccccaaatc attgagttct taaactacaa 240  
 gactaacgtt ggaagctata aggagaacag aatgaagac agtaaagcta gacctccaca 300  
 agaagttcca ttgaatgaca gcggtccaga tgagcatttg aagaaaatta aattggagga 360  
 tgtttcatgc cctctctgta tggagatgct gtatcaacct gctgttctta 410

<210> 3882  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-038-Q1-E1-C1  
  
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 acgtgcccc cgccgttaac gggccactcc atgtcatccc caacgtcatc accgccgagt 180  
 tccggacctt catcgagatc gtcttcgaga accccgagaa gagcatagac tccctccacc 240  
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 ggaagacgta caacctactg gacacggtga gccggcacac gatccaggtg taccgcggt 360  
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 tctgggagcg gtactacctc ggggagcagt tctac 455

<210> 3883  
 <211> 411  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB148-038-Q1-E1-C10

<400> 3883

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cctggaggac tacgcgcccc gcgagcgcg cgcgagatg ccctgcaggc acaggttcca 180  
cggcaattgc atcgtgccgt ggctcgagat gcacagctcc tgccctgtct gccggttcca 240  
gctgccggcc accgacgaca agagctcatg cagcggcgcc gacggtggtt tcgtcagtgt 300  
cgatgcggat cgtgaaggca gtgacaacgg cgggggtgat ggtagggcaa gctctccggg 360  
caacgccgag ctagctgaag ctgaagagag tggcaggcgg ttgccgccat c 411

<210> 3884

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-C11

<400> 3884

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tcggccccgg gagcaagatg atccgcatcc atggcgtaa gtgcggccca ggccacggca 120  
tcagcgtcgg cagcctgggg cgctacaagg acgagaagga cgtggaagac gtgcagggtga 180  
cgggggtgcac gatcgccggc accacgaacg gcctgcgcat caagtcgtac gaggactcca 240  
agtcgtcgct caaggccagc aagttcctgt acgagggcat caccatggac aatgtctcct 300  
accccatcat catcgaccag aagtactgcc ccaacaacat ctgcgtcaag tccggcgccct 360  
ccaaggtggc cgtcaacgac gtcgtcttca agaacatcca cggcacctcc aacac 415

<210> 3885

<211> 365

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-038-Q1-E1-C12

<400> 3885

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gcgggcgcg cgaggcggc gaatgcggt gatctaagaa gtacgttggt cgtccgaagg 120  
tagggcagac agtcccgtgc ggaggagaga ggccggcgac gggatgctgg acgogggtgg 180  
accggtccct cttcaagctc aagagcgaca ccttccgaaa agacaagaag aaatgcgcgg 240  
ctccaaacta cgctgcctac tatccgatag gcgttgacct gtntgcctgc cccaagaagg 300  
tccatcacat cgcgacgac ctcgacgttc ggcagatcaa gacgcagcca aaagatcccg 360  
tcgct 365

<210> 3886  
<211> 80  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-C3

<400> 3886  
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ctgacgtctc agaggatcaa 80

<210> 3887  
<211> 447  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-C5

<400> 3887  
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ccgccgatct ccgtgatcgg caagggcggg cgcccggtggc tctgcctgcg ggcgcaccgc 120  
gaggggtggac gcctcgtgct gcggcagatg cgcctgccgt cgcaggagct gctgcagccc 180  
tgcaaggagg acggcagggt caagctcctc atgcacccgg aggcccgcg gcggccgtgc 240  
gggggcggca cactgcagga acggcaaggg aatgatagct agcgctctta attgatcagc 300  
tgatcagatg atctgccgcc acgcacacgt cgtcttgat gggctggctg ctacaatgca 360  
accggtagat ctccctgctt agtttcttga gatcgagggc tccagttctt gctttgcac 420  
ctgcaaccgt tggtcacaat ctttgcc 447

<210> 3888  
<211> 436  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-C6

<400> 3888

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cggcggccac gccgcctccc cccacaacac catagacccc gtcctggcag cctccagcgt 180  
cgtgctcagc ctgcagagcc tcgtgtcgcg cgaggcggac ccgctggact cgcaggtggt 240  
gacggtgacg aggttcctgg gggcgggcgc gttcaacgtg gtcccgggct ccgtgacgat 300  
cggcggcacg ttccggtgct tctcgaccga gggcttcctg cggctgaagc ggcggatcga 360  
ggaggtggtc gtggcgcagt ccgcggtgca ccggtgcgcc gcgtccgtgg acttcggcgc 420  
cgggtgggagc ccgctg 436

<210> 3889  
<211> 445  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-C7

<400> 3889

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tgagccggca cagatccag gtgtaccgc ggtcatggac ggcaatcatg ctgacgttcg 180  
acaacgcggg catgtggagc gtgcattcca acatctggga gcggtactac ctcggggagc 240  
agttctacat cagcgtcgtc tcgccggcgc gatcactgcg cgacgagtac aacatgcccg 300  
acaacgcctt ccgctgcggc aaggtcgtgg ggctgccgct gccgccgtcc tacgcccccg 360  
cgcgctaaga cgacgaaggc ctcgttttct cctcgtggtc tgaccatcca atccaaactc 420  
aaaagaacat atacgacaga agcgt 445

<210> 3890  
<211> 419

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-038-Q1-E1-C8  
  
 <400> 3890  
  
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 ccaccatccc gcgcatgtac cagccacca gcgcggtgct gcccgacgcc accgtgctcg 180  
 tggccggcag caacaccaac tcggcctaca acttcagcgg cgtcgacttc cagaccgagg 240  
 tgcgcgctga gcgcttcacc ccgcggtacc tcgccccga gcgcgcggcc aaccgccccg 300  
 cgatcgacgt ggccaccgtc cccggggacg gcatggcgta cggggccaag ttcacgttcc 360  
 agttctcgac gcccggtgcag gccgtggccg agcccacct aaaggtgacc atgtacgcg 419

<210> 3891  
 <211> 425  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-038-Q1-E1-C9  
  
 <400> 3891  
  
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 aaggctggcg cgcattctcg ggctcaggcc accatgcac cgtgtgcacga ggctggaccg 180  
 cgccctccat ggaaacttgc catggttctc cgcggacctg gtctgttccg tgcacggctc 240  
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 ctgcaaatca tgctctcttt catgcacggc ggtaggtgcc cgtgaggagg tggatgaactc 360  
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 tactg 425

<210> 3892  
 <211> 449  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-038-Q1-E1-D1

<400> 3892

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tccatcccat cccgccgcgc ccgtctctac ggtecgtaat aagccgcgcg atccagggat 120

ggagatgaag aagatcgctt gcgcgcgtct cgtcgccgcc tcggccaccg tggcgctggc 180

cgcgagggcg ccggctccgt ctcccaccag cggctcctcc gcggtcgcac ccgccatcgt 240

cgggggccgcc gtggcctcct tcttcgcgta ctacattcac tgagccgcgc gacgaggagc 300

cggagccgga gggaagagac caagggtggg ggagagactt ggctgccctg cgctgctctg 360

ctgctccgcg gcattccga tgcgtgggcg tgctctgatt gggcacggcg gtggcagtgg 420

cacaccttcg tcttcctttt gtttgtttt 449

<210> 3893

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-D10

<400> 3893

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atggaatcaa catctccaag tgcagccagc agcagcagca cgcagctatc cccacgttct 180

ggttctgcag aaaagtcttg ctgcctatca agggaagatg ttctccggtt tctcattgga 240

tgcttggtg ctcttgctcc catccgcgtg actcagatat ctcccttggt agccatcaat 300

ccgcagtaca gttacgtgga agcatctgcg cctgcgatgg aagcaattca gaagatccct 360

caagacccat gcgccgttgc tgtagtggag acgatgccag atggaactcg tagcatacta 420

ggagacatct ctacttacia gctgtg 446

<210> 3894

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<212> DNA

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<400> 3894

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cgacgacgct ccgttcggct ccggcaaacc acatcaagtc gcgatggaga tgaagaaggt 180  
cgcttgcgcc gtcctcgccg ccggcgcttc cgccaccgtg gtcctcgccg ccgaggcccc 240  
ggcgcccgcc cccaccagcg cctcctcggc cgcgttcccg gccgtcggcg ccgtgctggg 300  
cgctccgtg ctctccttct tcgctacta cctgcagtaa aattaaagga ggatcggagg 360  
gagaggctgc tggctgcat tgcctgtatt cggttggatt ccgtttatat atatatttaa 420  
gtactttaat ttgggtctga acatgtcg 448

<210> 3895  
<211> 421  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-038-Q1-E1-D12  
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aagcctgttg taggcaaagc aagaaaattg aaggatctca tgataaaaag tgataatagg 180  
atatgtgctg actgtggtgc acctgatccc aaatgggcat ctactaatat tggagtgttt 240  
ctttgcttaa aatgtggaga tgttcatagg gcaattggac ctgacatttc aaaggtttta 300  
tctgtaactt tggatgattg gtctgacagt gatatcgact ccatgggtga ggttgggtga 360  
aactcatatg caaattcaat ttatgaggct tttcttccaa aagatcacc aaacccaaa 420  
c 421

<210> 3896  
<211> 363  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-031-Q1-E1-C7  
<400> 3896

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aaaccagccc acgcgacctt ctacggcggg cgggacgggt ccggcaccac ggccggcgcg 240  
tgccgggtaca aggacacgcg cgcgcagggg tacggcgctg agacgggtggc cgtgagcacg 300  
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ccc 363

<210> 3897  
<211> 365  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-031-Q1-E1-C8  
<400> 3897

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cccgtccac cacacccgag cggggctcgc agctatgtcg ccgtcggagc cgacgcggga 180  
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ggaggagcgc aacctgctgt ccgtcgcta caagaacgtc atcggcgctc gcatggcctc 360  
gtggc 365

<210> 3898  
<211> 399  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-031-Q1-E1-C9  
<400> 3898

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gcaccggcga ccggcagcgc gtaccaaagg aactggatcg agatcgagaa cgtcgagaac 180  
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cagtgccagc attcttaca ttgcaagatc ctcccgaata gcttgggtgct ggattttgtg 300  
acgaacgtcc agatccgcgg catcacgtg ctcaacagca agttcttcca cctcaacatc 360  
ttcgagtgca agaacgtgct gatcgacaaa gtgaccgtc 399

<210> 3899  
<211> 355  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-D11

<400> 3899

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gccacgctgg cggagatctg caggggaacc gcgttccccg acatctgcac cagcacggtg 240  
gggagcgagg cgcagagcgc cgggggtgttg gacgccatgg cgggtgttgcg gatgcaggtg 300  
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<210> 3900  
<211> 346  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-D3

<400> 3900

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acgcggcccg gaacgtggcc gcgtcgcacc tccacgcgtc caacgcgctg gtgcacatgt 180  
acggcaggtg cgggaggctc agggacgcga ggacggcggt cggcgagatc ggggaggcg 240  
cgaggaacgc cgtgtcgtgg acggccatga tcgacgcgtg ccgcgagaa gggcgccccg 300  
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<210> 3901  
<211> 404



<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-031-Q1-E1-D6  
  
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 cagccaagc ccctgacgcc tggcggggcg gtggtacacc acaaccacgg caagttcacg 180  
 gccggggcgt ggaaaccgc ccacgcgacc ttctacggcg ggccgggacgg gtccggcacc 240  
 acggcggggcg cgtgcgggta caaggacacg cgcgcgcagg ggtatggcgt gcagacggtg 300  
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<210> 3902  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-031-Q1-E1-D7  
  
 <400> 3902  
  
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 gccatggcgc ggctgccgcc caagatcccc accgtagcgc cggcgtggcc ggagttcggg 180  
 ggccggcacc aacagcagcg cagcccctcc gtgggcacgt tctcgcgcgc cgcgcccattg 240  
 cagccgtcgt ggggtggacga gttcctcgac ttctccgcgc ccaagcgcgg cgcgcaccgc 300  
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<210> 3903  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-031-Q1-E1-D8  
  
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 ggagcagcag atcgagggtg acagggcgaa gcaccggcgg aagaagcgcg cggcggcgca 360  
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<210> 3904  
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<223> Clone ID: LIB148-031-Q1-E1-D9

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 tcaaatgatc ttctgcaagg gacattttca gaagtttctg gatagagcag agagggctta 180  
 caggagattt gtaagggtaa gactctccgt atctgagcgg aatgggagat ctagcatgtc 240  
 caggtgtggt gtctgtggtg taagagcttc ctcatctcag ctttaccgca acaagttcat 300  
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<210> 3905  
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 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
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ctcatggaga aggaccacaa cggcaacctc acgctggagg agctcatgga cggcctccac 180  
atcaacggcc agcccgtgcc ggagtcggag atcaggatgc tgctcgaggc cgccgacacg 240  
gacggcaacg gcaccctgga ctgcgacgag ttcgtgacgg tgtccctgca cctcaagaag 300  
atgagcaacg acgagtacct ggcgtcggcg ttcagggtact tcgacaagga cggcagcggc 360  
ttcatcgagc ccgangagct gcnggatgaa ctgggccccca acgaacaag 409

<210> 3906  
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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-E12

<400> 3906

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gattcctact acgaggtacg gtcagattgg gcggacgggtg tgcccaagat caagttcaag 180  
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tgtcttgata ttgcctcagt cctaagccgg atacacagag gaagtgtcca tccgacagtc 300  
agaggagagg tctgggaatt cttacttggg tgtttcgatc ccagaagtac ctttcatgaa 360  
agggaagaga tacgcaaata cggaggatac aatatg 396

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<211> 366  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-E5

<400> 3907

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cggccacgcc aagccccgga cgcgtggcgg gcgtgtggta caccacaacc acggcaagtt 180  
cacggccggg ccgtggaaac ccgccacgc gaccttctac ggcggggcggg acgggtccgg 240  
caccacggcg ggcgcgtgcg ggtacaagga cacgcgcacg caggggtacg gcgtgcagac 300

ggtggccgtg agcacggtgc tgttcggtga cggcacggcc tgcggcgggt gctacgaagt 360  
gcggtg 366

<210> 3908  
<211> 422  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-E6

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gcgacatcag gtgcctggcg ctggagaaag tgcgccagtc tctggagctc ccctgcaggt 180  
actactcgct ggggtgcccc gagatcatgc cttactacag caagataaag cactaggcgc 240  
agtgcggcct gagaccgtac aactgcccct acgccggctc cgagtgcggc gcggccggcg 300  
acatcccttc cctcgtctcc cacctgaggg acgaccacaa cgtggacatg cacagcggct 360  
gcaccttcaa tcacagatac gtgaaatcca accccccggg aggtggaaaa agccaacttg 420  
aa 422

<210> 3909  
<211> 351  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-E7

<400> 3909

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ctctagcttt tgctcgggtg tctggagaca gagcgagaga gagagagaga gagagaggta 180  
gacggagatg gagtgcctgc tggggctgct caagggtcgg gtggtgcgag gagtgcacct 240  
ggcaatctgc gaccgcgtca cccacagcag cgaccctac gtcgtcctcc gccacggaaa 300  
gcagaaagtg aaatcaagta taaaataccg cacgatcaac ccagaatgga a 351

<210> 3910

<211> 379  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-031-Q1-E1-E8  
  
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cgacggctac gccgaccgcg ggggcccgtc cctgggctgt tcgtaccagc tgggtccccga 180
gaagagcaag gagagcgccg gcgagccgtg gcagttcatc ggtctcctcc cgctgttcga 240
cccgccgcg caccgacagcg cggagaccat ccgccgcgct ctccacctgg gcgtgaacgt 300
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gggcagcaac atgtaccgg                                     379
  
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<210> 3911  
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 <223> Clone ID: LIB148-031-Q1-E1-E9  
  
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caccggggat tgggttcaat tggcggtcga aaaacaccgt ctttaatcgg gaaaatactc 120
ttcgtaaca tatttaatca cttttcaaca cgacccctt tcaacagcta gcgtcataat 180
tttaaagccc gcacctatca aacttcccag cattttctca gtctgactct tcaaagtgat 240
gccccctttc acagcct                                     257
  
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<210> 3912  
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 <223> Clone ID: LIB148-031-Q1-E1-F6  
  
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<210> 3913  
 <211> 388  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-F8

<400> 3913

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 tcggtaggag cgtttgagat gagaactcct cctcgaagaa gaaccgtgga acagctctta 180  
 gctctgcaac aggccatctc gcagctggaa gcgcacgtgc aagcaggaaa catttttctc 240  
 ctgaagctcc ggtccctcat gcttgcagcg tttcctcaga gcaccaacag agttgcagct 300  
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<210> 3914  
 <211> 377  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-F9

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 taggtgcttc gccatcatgt atagagcgtg agcgcggagt tggtgggggc ggatcaaccg 180  
 aaacaccatg gattcttcgc cggagtctga tcctcacgcg cgagccgcta tttgctatgg 240  
 agagccctcc cccacccgat ccattatgtg acgagcaagt gactgaggaa cccggagctc 300  
 tgcagggtga agactttaag gaggagctcg cagaagaaca tgaagaacca tctgggaaaa 360  
 cagtgtacc acaaggg 377

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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-031-Q1-E1-G11  
  
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 tgacgaacgt ccagatccgc ggcggcacgc ggctcaacag caagttcaaa aacctcaaca 180  
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 ccaacacgga cggcatccac atcggcgact ccagcaacgt gaccatcagc agcaccacca 300  
 tcggcggtccg cgacgactgc atctccatcg gccccgggag caagatgac cgcattccatg 360  
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<210> 3916  
 <211> 352  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-031-Q1-E1-G6  
  
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 ctcgcggtgc cggcctcggc gaagtccggg gagctgagcg cgatgggggtt gctggcgggc 240  
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 <211> 359  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-031-Q1-E1-H7  
  
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 gcaatggcaa gacagacagc acgaaggctg tgcaggagggc atgggcatcg gcggtcggcg 240  
 gcaactgggaa gcagacaatc ctcatacca agggcgactt ccttgctgga caactcaact 300  
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<210> 3918  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-H8

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 actcgggtgtc gggcaccagc gcgaaggagg tcatggacct gatcatggtc acgcagtact 240  
 tcgacaccat caaggagctc ggggacggct ccaagaacac cagcatcttc ataccacag 300  
 gaccaggcca cgtgaaggac atcagcgagc agatccgcga cggcatgatg caggcctcaa 360  
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<210> 3919  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-H9

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ggctacttcca ccagctcgtc ggcgcgcgtc acttctgcca cagccgcggc gtctaccacc 300  
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<210> 3920  
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 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
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 gccgacgccg acgcggaccc ggcgcgcgaca cgatccggtg gatcaagtgc atcacacctt 180  
 tagggaggcc ccttgacag cagtttgtgc tgcaaattct atatagctct gtcgcagcat 240  
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 tgaccagat cgtcttccca acgagttggg cagtatgagc ataaaggacg acaaggacgt 360  
 tgaagatant gttgtcaatg ggcaatgggg cggagcctgg tcatatca 408

<210> 3921  
 <211> 418  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-032-Q1-E1-A12  
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 aagcccaagt gcgtggccgg cgcaggaac gaccacgct gccgcgtcgg gcccggtgcac 300  
 gacccgggca gccaggagga tgagggtcc agcgtcacca tcgacgcgca cggcgccgcg 360

gcccgcacgac gtcggccacg acgaccggag cgactacaac gaccccgacg tgcccaac 418

<210> 3922

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-A4

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gaagatagcg ccgtcgatgc tctcgtcgga ctttgccaac ctgcttcggg aggctgagcg 180

catggtccgc ctaggcgccg actggctaca tatggacatc atggatgggc acttcgttcc 240

taacctgact attggggctc cgggtgatcca gagcttgagg aaacatacca aagcatattt 300

ggactgccat cttatggtca caaagccttc agattacgta gaaccatttg gaaaggctgg 360

cgcttctgga ttcacattcc atatagaagt tgctagagac aactggcaag atctcatcca 420

aagcattaaa tcaaagggtg 440

<210> 3923

<211> 194

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-A5

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caactacat gacgtcactc gacacttata tgacgaatga ttcagtagcg gttggaacgg 120

ttgtatgctc ctgaaggact ggctcgctgt cgtcgaccaa gaaacagaat catcagccag 180

acgattcagg ctgc 194

<210> 3924

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-A6

<400> 3924

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<212> DNA

<213> Zea mays

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gg 422

<210> 3926

<211> 438

<212> DNA

<213> Zea mays

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acatccccat cttcaaggat ggtctggggt gtgggtcctg cttcgagatc aagtgcgata 360  
agcctgtgga gtgctccggc aagcccgtgg tggcgacat cacggacatg aactatgagc 420  
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<210> 3927  
<211> 393  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-032-Q1-E1-B10  
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gccccaacca attaataata tatatatata gctaggatcg atcgtcagta aaatggcagg 240  
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caccgccgcg gcgacgccga ccgacgccgc catcgacgag gcgtacgcgc atctcgtcaa 360  
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<210> 3928  
<211> 409  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-032-Q1-E1-B11  
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caacatattc ttggacaatc ttgttaacag agttttaagg tttcccagca gacatttttc 240  
gagtccagga agagcgcgtg caaccaccac attcatataa ttaataagca aggttttagag 300  
aagaggcaac atgggcacaa agatgaagaa ggggatcctg aagccgttcc gctatatctc 360  
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<210> 3929  
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<212> DNA  
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<223> Clone ID: LIB148-032-Q1-E1-B12

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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-B2

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<210> 3931  
<211> 444  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
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ctcgtcgggtt actgcgccga gggcgagcag cgcctgctcg tctacgagta catggcacta 240

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tggcgcacga ggatgaagat cgcgctcggc gcggcgcggg gcttagagta cctgcacgaa 360

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tagtgacaag gagtatgctt acctcggcac acattctgtg cagatcatac acgacggagt 180

tcgtctcata tttccactat tgtcgtctcc tgcaatttgt atacatgcc a gattactct 239

<210> 3933

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-B6

<400> 3933

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tgttgttttg atttgtgttc gctttggcgg atctggctgc gcacagagtg gccggagaag 240

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<223> Clone ID: LIB148-032-Q1-E1-B7

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 gcggcaaggc cgactacacc aacatcaccg cggcgctgga ggatatcccg gtgagcaaca 360  
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 <213> Zea mays  
  
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<210> 3938



<211> 410  
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 cgcgcatcac ggaatatatg tgggcgatga taaggatgac catttcacaa gaggaagagg 240  
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 agcaacacgc cttgcccggg gtgcaccgac gaaaccagcg acagcagcac agagacgaac 360  
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<400> 3940

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<210> 3941

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-C6

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gcctcgccct tctttccagg gtgcggcgcg ccggccgctc ctaagaacgg ccttggagag 180

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gcggtggcg atgtggaaca cgagaccgta actgtacctt cgtcagtgcc gaggactttc 360

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cgcgcgcggc ggcggtggcg gtggcgggag ggcgcgctc ggtgccggcg ggtccgctgg 180

acatcgcgca gctggggcgcc aagggcgacg gcaagtcgga cagcaccgcc atgatactca 240

aggcgtggaa gaacgcgtgc gagggcgacg ggttacagaa gatcgatc cgcggggca 300

actacctgac ggcggggctg gagctgaagg gccctgcaa gtcctccatc atcatccgtc 360

tcgacggcaa cctgctcggc accggcgacc tcagcgcgta gcagaggaac tgga 414

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<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-C8

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ccgacgtacc accgccaccg caggagcgag atggagatga agaggatcct cttcgccgtc 180  
ctcgtcgtca tcgccgcctc ggccaccgca gtgctggcct ccaccgagggc cgccgccgcg 240  
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gccgctggcg ccgcgcgcgc gggggcctcc gccagcagcg gcgcgcgcgc cctcgccgcc 360  
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ttacgta 427

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<223> Clone ID: LIB148-032-Q1-E1-C9

<400> 3944

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tcttctttca cctctccaac atgaaggtca acaccaagat caagctggag ccggtcatgg 240  
cgccgtcgtc gtccctgccg cggagcgcca gcgagctacc cgacccgccg tcaccgttca 300  
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 <213> Zea mays

<223> unsure at all n locations  
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<400> 3945

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 <211> 380  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-D10

<400> 3946

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<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-D11

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aagacttgat ttagttatgg acggattggg aggcctcttg aaagttcgcg tgggtccgggg 180

tatcaacctt gcctaccgcg acgcaagagg cagcgatccg tatgtcgtcc tacggcttgg 240

caagaagaaa ctgaagacaa gcggtgaagaa gagatccgtg aaccccatat ggcaagagga 300

gctaactctg accgtcacag atcccagcca accactgaag ctggaggtgt tcgacaagga 360

caccttcagc agagacgacc ccatgggaga cgcggaagtg ga 402

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gacgcctggc gggcgtgtgg tacacgacaa ccacggcaag ttcacggccg ggccgtggaa 180

acccgcccac gcgaacttct acggcgggcg ggacgggtcc ggcaccacgg cgggcgcgtg 240

cgggtacaag gacacgcgca cgcaggggta cggcgtgcag acggtggccc gtgagcacgg 300

tgctgttcgg tgacggcacg gcctgcggcg ggtgctacga ggtgcggtgc gtggacagcc 360

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<211> 365

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-A7

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<210> 3950  
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<212> DNA  
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<223> Clone ID: LIB148-025-Q1-E1-A8

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aactacacca gggccgacga cgggcagatg tacttcgtcg ctcccggagc gcctgcgtg 240  
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<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
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<223> Clone ID: LIB148-025-Q1-E1-B6

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<223> Clone ID: LIB148-025-Q1-E1-B7

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<210> 3954  
 <211> 412  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C6

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gaacaggtac cataggatga ggcgcattga ggatgctcgc atgtgttcgt aagaggtcta 360  
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<210> 3955

<211> 178

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C7

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<210> 3956

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C9

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<210> 3957  
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 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-025-Q1-E1-D11  
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<210> 3958  
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<210> 3959  
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 <213> Zea mays  
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 aaccaatgaa caaaaagaag cttggttcca agcccccaa ggaaccaacc tccgcatcaa 180  
 taactgtggc ttcttcggca gcgcggcgac catgaacatg tgctccaagt gccacaagga 240  
 gatgataacg aagcaggatc angccaagct ggctgcctcc tctatcgaca gcacgtgaa 300  
 cggcagcgac gccgtcatgg agccggttgt tgctggcagc aacacggtag tagctgttgc 360  
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<210> 3961  
 <211> 447  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
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caacaatggc ctccagggtcc tccatctctac ttgcaacggc gatgctgggtt gcgctgtttg 120  
 cgggttggttt gtgcaccacc ccgctcacct tcaangttgg caaggggatcc aagcctggcc 180  
 acctgatcct ccccccaat gttgcaacca tatctgacgt ggagatcaaa gagcacgggg 240  
 gcgatgactt ctcttttacg ctcaaggagg gcccgaccgg cacctggacg ctcgacacca 300  
 aggccccgct caagtacccc ctttgcaccc gctttgctgt caagtccggt ggctaccgca 360  
 tcgccgacga cgtcatcccc gccgatttca aggccggcna cacctacaag aacacactca 420  
 gcatctaatac agcctctgat gatgaat 447

<210> 3962

<211> 265

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-D6

<400> 3962

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 tcggcagagg gcacttcggc gaggcggcct cgcacgaga gttgtcacgg agtgcgacga 180  
 tgaggatgag gagacggata gggggagtca cgctcgtagg atgtcaggcg gcggtggcgc 240  
 cgaggaggag agctacgggc cgccg 265

<210> 3963

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-E1

<400> 3963

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 ctctccacc ccggaggccg ttagcctgct ctgcactgcc aaggteccat gcaccggcgt 120  
 caccatggat gacgtcaacg tcgagtatag cggcaccaac aacaagacca tggctatatg 180  
 cacgaacgcc aagggcagca ccaagggttg cctcaaggag cttgcatgct tctagaccct 240  
 ccgtcgactg acccatctct ctagttataa tttttctctc gtccttgcat tgcccattac 300

atgctatcca ttggtaacgc acaacagtaa aatgacagac atccgacagc tatattaggt 360  
 tcgacggtgt aacaccctga atttgagggt ataaaatttt ttctctaaat acaacaaaaa 420  
 tcaggtgtaa cctct 435

<210> 3964  
 <211> 427  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-E10

<400> 3964

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 aagatcggcg agggcgggcta cgcccccgtc taccgcgcct ccctggacca ccccccgtc 120  
 gccatcaagg tgctccggcc cgacgcgcac caggggagga agcagttcca gcaggaggtg 180  
 gaggtgctca gctgcatccg ccacccaac atggtgctcc tcctcggcgc gtgccccgag 240  
 tacggctgcc tcgtgtacga gtacatggag cacggcagcc tcgaggaccg gctgttccgt 300  
 cggggcggca cgccgccgat cccgtgggcg cagcggttcc ggatcgcggc ggagatcgcg 360  
 acggcgctgc tgttcctgca ccagacaaag ccggagccgc tgggtgcaccg ggacctgaag 420  
 ccgggca 427

<210> 3965  
 <211> 389  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-E3

<400> 3965

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 ccccgcgctc cgctgctga agcagaacct gtcgttctg gtgtccgtgc tcgaggaccg 180  
 cgcgcagccc gtggcggtgc gggaggtgat gcgcgcctcc ttcgaggcgt tcctgatggt 240  
 gtccttgggc ggcggcaacg agcggagctt cgtgcgcgcc gaccacgcca cgggtggagga 300

ggacttccgg agcctgagggc ggccttctc cacgtgcggn gaagggctgg tccccgagga 360  
cgtggtggcg cgggaggcag agacggccg 389

<210> 3966  
<211> 383  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-E5

<400> 3966

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cgatgtggcg caggctgtca tggaatgcaa catggacacc gagcgattcc ttggggcatt 120  
catggtctcc gccaaactgcc ccaacgtgtg cctcggtgaa ggcttctcct gcggcatgtg 180  
catcaccttc cacagcagct gcatctgcac taagccgtgc tacattaact gactcccggc 240  
agttcgatgg tggacgttta ttctagttac tggcatacgt gattttttcc ccactaacag 300  
tcacacgacg cacgtgctgg catgtacgtt gtgtagtaca tgcattgtctt gctggcttca 360  
gttgctgact agtgatgagt tgt 383

<210> 3967  
<211> 395  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-E6

<400> 3967

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gggactcgca gcaccactgg ggcgtgcgcg gggagagcga cggcgacggc gtctccgtga 120  
tggggtccag cgatatctgg atcgaccacc tgtccatgag cagctgcgcg gacgggctgg 180  
tggaacgggt ggacggctcc accgccatca ccgtctcaa cggccacttc acgaggcacg 240  
accacgttat gctgttcggg gccagcgacg ccgcgtcaa ggacagggag atgcaggatca 300  
ccgtcgctt caaccacttc ggcaaggggc tgggtgcagcg gatgccgcgc tgccgtcacg 360  
gcttcttcca cgtggtgaac aacgactaca cgcac 395

<210> 3968

<211> 309  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-025-Q1-E1-F1  
  
 <400> 3968  
  
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 acaacacaac cgtccatta ttaaaccaac actgacacga acagcagata cttcgacaac 120  
 ctccatatgg agagggcacc agacgacgca ggcacatcgg cagcttaaac gacccatgac 180  
 ttactgacca ccnacggaga cggagcacia agtggagggt gctctccttt tgggattttg 240  
 tagcctgcc a ggtgcggcc atcctccaac tgtttgccgg cgaggatcag acgctgctgg 300  
 tccggggggg 309

<210> 3969  
 <211> 430  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-025-Q1-E1-F1  
  
 <400> 3969  
  
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 ggtcctcgac aacgaagctc tctacgacat ctgcttccgc actctgaagc ttgctacacc 120  
 cacttttggg gacctgaacc atctcatctc tgcaaccatg agtgggtgta cctgctgect 180  
 gcggttccca ggccagctga actcggacct tcggaagctt gcggtcaacc tgatccccctt 240  
 cncccgctc cattttctca tggtcggctt cgcgccgctg acgtcaaggg ggtcncagca 300  
 gtaccgcgcc ctgaccgten cggagctgac ccagcagatg tgggacgcga agaacatgat 360  
 gtgcgcggcc gacccgcggc acgggcgcta cctgacggcg tcggccatgt tccgcgggaa 420  
 gatgagcacc 430

<210> 3970  
 <211> 450  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-025-Q1-E1-F4

<400> 3970

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gcccccgcg cgtgcccgtta cgtgccaggg acgacgccgg gcggccgatg gagttcacgt 120  
cgtcctactt ccacgccttc ggcaaccccc acctcgcggc ggtgggtctcc ggcgacggcg 180  
gcagcgcgca ggcccaccgg ccgcgccgct ccaccgacgg cgccaaggcg gaggacggca 240  
ggagccccac caccacaacg gcgaggcgcg cgccgtccat gttctgcgtc cccgacacgg 300  
aggcggagga gcccaacggc ttcttgagc agtgcaccct ctgccgaag gcgctctgcg 360  
gcgacatctt catgtacaga ggggacacgc cattctgcan ccgacaatgc aggagggagc 420  
agatcgacat gggacgcata aggcaccggg 450

<210> 3971

<211> 411

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-F5

<400> 3971

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cgtggattct tgagagtgc cggattacta tttttgagaa tcatgagctg gccagcattg 120  
tgctggatta caaaaggagg tgtgtccgcg atagtgtgct gcagtcacac acctctgtcc 180  
atgaggattg caacattgag tctggagaaa caaccttgca ctgtgagcat gtgctgagcc 240  
ttgaatcagg tccgaccata gtgaaggccc ggaccatgtg gaggcctaag ggaaccaagg 300  
cccaaganac accggttcca tcttcattct gatttttgtc agatgttcga gatggtgact 360  
ttggcagcaa actatctggc agaagatcag aatggttact agcatcctct a 411

<210> 3972

<211> 391

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-F6

<400> 3972

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gccgccgcaa ccgccacatc agccatgggc gctgcgcaa ccaagcccaa gacgcttgag 120

gggcaggccc cagctgagge cgccgtctcc acaccaagg ttgcgcccga ggccactcca 180

atctccgttg aggttgccgc tgatgaacag gtagctgaga aggtgggtgt ggaggagccg 240

gctgcggcgg ccgacgttga gcatcagaag gctaagagg tgctcgctcc agaggcggcc 300

gtcgccgagc ccgaccacaa ggaggaggaa gccgtggaga agaccgtcgt cgaggaggag 360

aagccagcgg cagcagccca tgcagaggaa a 391

<210> 3973

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-F7

<400> 3973

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gctccaatgg ctgttctttc tgctgctgat gcttccccgg tctcagctat cgggtttgag 120

ggctatgaga agcgcccttga gatcacattc tctgaggcac ctgtctttgt ggaccctcat 180

gggcgtgggt tgctgtccct ctccagggcc cagattgact ctgttctgga tcttgcacgg 240

tgcacaattg tgtctgagct ctccaacaag gatttcgact catatgtcct ttctgagtca 300

agcttgttta tctatcctct gaagattgtc atcaagacct gtggcactac caagctcctg 360

ctcaccattc caagaatcct tgagcttgct gaagagctgt ctatgccact tgctgctg 418

<210> 3974

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-F8

<400> 3974

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atgagagcct tgttctcctt ggtcctcttc tgcacgtgc atggtgagaa ggaagagtca 120



aagggcatcg atgcgaaagc gtccgggcct ggtgggtcct tcgacatcac caagttgggc 180  
gcctccggca atggcaagac agacagcacg aaggctgtgc aggagggcatg ggcacggcg 240  
tgccggcgca ctgggaagca gacaatcctc atacccaagg gtgacttcct tgtcggacaa 300  
ctcaacttca caggcccttg caagggcgac gtgaccatcc aggtggatgg caatctgctg 360  
gcgaccacgg acctaagcca 380

<210> 3975  
<211> 434  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-F9

<400> 3975

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cttctgctcg acgctgtgcg agggcaagaa ggggacggac ctggctcgtgt gcaaggagtc 120  
ctgcgcgctc tcccagcagt ccaacctggt gctgtacggc aggatccagt gcaagggcaa 180  
atgcaccgag cagaagggca tcacggcgcc ggccatgaag gtctgccagg aggagtgcga 240  
caaggcgtac gtggtgaagg cggccgaggt caccaaggcc tgcagcgtca cctgcgccaa 300  
ggagaagaac ccgcgcctca gcgagaactg caagaggctc tgcacccctc ctctttcttg 360  
aagcgaagcc cttgaaatg aatgaaccat gcatgcatgc atgcatgtat gcatgcgccg 420  
gggtgacgtg gcgt 434

<210> 3976  
<211> 418  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-G1

<400> 3976

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ttgcggttgc ttggcccaga tctgcggcgc attcggcggt tctgatctcg cgtgcacctc 120  
gtttccctcg gcggtggatc agtggcggct tggtcgagat gggcgatgcg gttgatgaca 180  
tcatctgtgc aacggatgcg gcggtcgccg tcgaggatgc ggccagtggg aagcccgcga 240

tgctctctag cttagggggg caggggtgagg aagagcatga ggagaaggac aatgaggaca 300  
 agtcaggcga gagcgagggtg atcaacccgc cagaagacgc tggcgggggaa ggcacctcac 360  
 ccctggaagg gttgaagcct cgcctttcca aggggaatca aagccatggg cctaattgc 418

<210> 3977

<211> 430

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-G3

<400> 3977

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 ccctctcccg gtacttcagg gtgtccaaat cctacaacaa ggagggtccc aaaaattcca 120  
 aggagtccat aatgaagttt tccaaggaca aaaccaaaaa ggtaaaaggg ttcacgtcag 180  
 aatccactgt gagctacaga gatcggctga agatcatggc cggcctgggc aaaccggacg 240  
 acctcaagct gggtctctacc gaaaagaagc tcgtccaggc gtacaacgag aaaccagtcc 300  
 tctcgcggcc ccagcacagc ttctacgaag gagaggacta cttgangtg gaccttgaca 360  
 tccaccggtt cagctacatt gctaagaang ggctggactc gttcaaggca cgcctcaaga 420  
 acggcatcct 430

<210> 3978

<211> 258

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-G5

<400> 3978

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 ctcggtcaca catctaataa cgaaaggctc cgcccttttc ctccgacatc cacagggggg 120  
 aggggaaaac gactgcattc acccggcggc agtactggcc tcgggttcgg ctccggcgac 180  
 gacgaccgcc gctgtaatcc tactcctatg cgtcgtcctc tcaactgtcca ctgctgacga 240  
 ccccaacctc tcagacta 258

<210> 3979  
 <211> 220  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-025-Q1-E1-H10  
  
 <400> 3979  
  
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 ttcatcttac tagtgtggat ctataattcc attcaaaata tatacatgat ctaaatttca 120  
 tgccaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 180  
 aaatgaaaga aaaaaaagga ggctcgctcaa aaggttcgat 220

<210> 3980  
 <211> 419  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-025-Q1-E1-H11  
  
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 gcgtggaaaag ccagtcttca tcagacgccg gacggacgac gacatcaagc ttgccaacag 180  
 tgtggatgtg gcatccctgc gccaccaga gcaggatgca gagcgtgtga agaatcccga 240  
 gtggctggtg gtcattggcg tgtgactca cctcggctgc atcccactac cgaacgccgg 300  
 agactttggc ggctggttct gccatgcca tggttccac tacgacatat ccgggaggat 360  
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<210> 3981  
 <211> 463  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-025-Q1-E1-H2  
  
 <400> 3981  
  
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accgggtgca agcccgacgc ggcgggcactg gtggtgacgg tgaccgacct gtgcccgcgcc 120  
aacgaccagt ggtgcaagcc accgcggggag cacttcgacc tcagcatgcc cgcgttcctc 180  
cagatcgcg c aagagaaggc cggcatcgtg ccgatctcct accgcagggg ggcggtgcgtg 240  
aagcagggcg gcatccggta caccatcacc gggaacaagt acttcaacat ggtgacgac 300  
accaatgtgg gcggcgctgg cgacatcgcg gcgggtgtcgg tgaaggggag caagcgcgtc 360  
aagtggacgg agatgaagcg caactggggg caagtgtggc agaacgggga aggaactcac 420  
ctgcaattcg ctgacgttcc ggggtgatgac cagcgaccac cgc 463

<210> 3982

<211> 52

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H4

<400> 3982

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<210> 3983

<211> 276

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H6

<400> 3983

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aatagcagag tgagagattt ggatggatcc cccgcacgcg cccgcagacg tcgacctaat 120

ataatgaaca atgcgggggc ggccggaatc aatgaatcat cagtaacggg gtagaaatca 180

tgtcatgtca gggaaaaaac gaagcaccgg gacacacacg catgggcatg gggacaaatg 240

actgcgtggc gaggagctgc aatccacgga cgggga 276

<210> 3984

<211> 450

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H7

<400> 3984

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acaccatcca catcgacggc tacgccttct tcgccgtcgg catggggccc ggcaaattga 120

cggcagcgtc gcggagtacg tacaacctcc tggacacggt gagccggcac acgatccagg 180

tgtacccaag gtcgtggacg gcggtgatga tgacgttcga caacgcgggc atgtggagcg 240

tccgctccaa catctgggag aggcagtacc tcggcgagca gctgtacgtg agcgtcatct 300

cgccggagcg gtcgctcagg gacgagtaca acatgccgga gaccagcctc cgctgcggca 360

aggtcgtcgg cctgccgatg ccaccgtcct accgcgccgt ctagagcgtc gaccgatcgc 420

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<210> 3985

<211> 423

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-H9

<400> 3985

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atcgggagcg taccgttgcc gctgacacgg gttaaccagt gttgagatcc gactgcagc 120

agagcttttg gtgaccctac ttgctacttc cacttgcaact cgccggattg atgaagctcc 180

tgcatgcatt gcatgcggag tcttcaaggg gatttcagct ggcaactcatg cattcaagta 240

aaggctccaa ttcgagatac cgggtgcgttt caataagcag gttcaacagt atctttcgtt 300

aaaaaaaaa gctctgcttt tcgggcggtt gctatgtcgc actgcacagt gtggcggtanc 360

gcagcgatgg caagctaatt cctaagaaaa aaacatacgt gcatatagaa aactgatata 420

tag 423

<210> 3986

<211> 247

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A1

<400> 3986

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 ccacgcctgc cgctggggag acgacgaccc ctctgtcagg cggcggttac tccacccta 180  
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 gcggggg 247

<210> 3987  
 <211> 402  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A11

<400> 3987

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 cgtcgcgctc gcgtcgcca tgtgctcggc atgcggtcgc aagccgaagg cggccacccg 180  
 tgcagaccg gccgcttcgg accagtccac cgggacgggc tcgggctccg tctccggttg 240  
 cggcggaagc caggaggcta gcgccgcgga ggcgaggag gaagtgggtga gactgtcacc 300  
 ggagctggcg atgcacggcg ccatcgaccc ggtgacgctg ccgtcgtcga cgtcgaagcg 360  
 gcgcctgtcc atcagcgtga gcaagaagct gagcatgaac at 402

<210> 3988  
 <211> 380  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A12

<400> 3988

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 ctcccgcgct tgggtttgtc gtcaccggcc gcatctactg cgacaactgc cgcgccgggt 180  
 tcgagacaaa cgtgtccac gccatccaag gcgcgacggt ggagatggag tgccgccact 240  
 tcgagtcga gcaggtccac gacaaggcgg aggcgacgac gggccccggc ggctggtaca 300

ggatggagat cagcggcgac caccaggacg agatctgcga cgtgcgcctg ctcaagagcc 360  
cgaggcggac tgcgccgaga 380

<210> 3989  
<211> 106  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-026-Q1-E1-A2

<400> 3989

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cgctgcgcgg tggcgattct actcgtagcc agggatcggg atccac 106

<210> 3990  
<211> 334  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A6

<400> 3990

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cagcgcagcg caggtgtgaa ggaaggggga cgcgaggaa gatggggctc gcgttcggga 120  
agctcttcag ccggctcttc gccagaagg agatgcggat cctcatggtc ggctcgcacg 180  
ccgccggtaa aaccaccatc ctctacaagc tcaagctcgg cgagatcgtc accaccatcc 240  
ccaccatcgg tttcaatgtt gaaactgttg agtacaagaa cattagcttc actgtctggg 300  
atgtcggggg tcaggacaag attagacctc tttg 334

<210> 3991  
<211> 268  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A7

<400> 3991

ccgggtcgac ccacgcgtcc gccgaaatcc acaaaaggga cttccgggtc cgtgctagcg 60

tctagcgatc gcgtcggcct ccactccacc ttcccgaana agcttaccct ttgtgtttgt 120  
 gtgtctgtct ggcaatcgat cgatctccat gacgacgtcc ccgccgcgcg cacgcctgct 180  
 cgccatggcg ctggcgctcg cctgcgtgct gctcgtcaag tccgcggacg ccgccacgcc 240  
 cggcggctcc gcgtacgggt gcaacccg 268

<210> 3992  
 <211> 230  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A8

<400> 3992

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 aagattcgca cggtcctctgc gcacggaaga caagcataac tcgagagctg gtccatagtg 120  
 ttagtgtgtc tgtctggcaa tcgatgaatc cccatgacga cgtccccgcc gcgcgcacgc 180  
 ctgctcgcca tggcacgggg ggctgccttg caggatgcac gctaagttag 230

<210> 3993  
 <211> 375  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-B11

<400> 3993

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 catcgctgcc ctgagagcgg cagaggcacc ggcagaatga acgcatgcaa gcagtcctgc 180  
 caaggcaccg gacgaatgaa ctcatgcagg tagtgctgca gctcctgcca ctgcagccaa 240  
 gtctgctgcc acgagaactg cacctgctaa ggcattctaa gccgccgtta ccgccgccgt 300  
 agccgctgcg tcatcgacgt cgtcgtctac gaagtctggt ccaactgccg cgccgaccac 360  
 agcctcctct acaac 375

<210> 3994  
 <211> 347  
 <212> DNA



<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-026-Q1-E1-B4

<400> 3994

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cgcgaccact tcgccacctt catgggcaac accatcgtgg agatccaggt cggcatgggc 180

cctgccggcg agctgcgcta cccgtcctac ccggagagcg acggcacctg gtcgttcctt 240

ggcatcggcg agttccagtg ctacgacagg ttcagtctga gtagcttgaa ggcggtctgct 300

gaggccgtgg gcaagccgga gtggggcaac gcgggtccgg gcgactc 347

<210> 3995

<211> 300

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-B5

<400> 3995

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accatgcatt cgccggctcg ccatgtaaga aacaggggag ttgaaagtgc gacacaccag 120

agaacgtgtc tgtgtatact gtgtaaaggt cctaaaggaa agagaagatg cacatattca 180

aagcctcgga actaattgct ctgttgtcca ctatgttatc caagtatata tttgttcttc 240

acttgtgttg agcaaaaata aaaaaaacat aaaaagggg cggccgctcc aaaaggttca 300

<210> 3996

<211> 322

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-B6

<400> 3996

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gatggccacc cgccggagcc ggggaagaag gaggatgtcg ccaccacggc cgccgggcct 120

ggagcaaacg atctggacga cccgcaattc atgtgctgcg tatgtctgga tcttctgtac 180

aaaccagttg ttatatcatg tggtcatatg tcatgtttct ggtgtgtcca caaagctatg 240  
catattttcc gggaatcgca ttgtgctgtg tgtacgcagc cctatataca cttcccgagt 300  
atttggaac tctgcatca at 322

<210> 3997  
<211> 318  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-B7

<400> 3997

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gcaccggtcg actcaccgaa cgcacgcagt cctgcagctc ctgccaaggc actcgaatct 120  
gctgccacga gaactgcccc cgctaatacga cctcaagccg ccttcatctc cgccgttgct 180  
gctgctccat cgtcgtcgtc atctatgaaa tcagggtccac ctgccgcacc tatcagcgcc 240  
gcctctacac cgtcttcttc catcgacgaa gagtttagcc cttccccgtc ggcatccaat 300  
cgcccaagtt gcctcccc 318

<210> 3998  
<211> 338  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-B8

<400> 3998

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tcaccgaagg cagcagctcc tgcagctcct gccaaaggatc tcgaatctgc tgccacgaga 120  
actgcacccg ctaatgcacc tcaagccgcc tccatctcct ccgttgctgc tgctccatcg 180  
tcgtcgtcgt ctatgaagtc tgggtccacct gccgcaccta tcagctccgc ctctacaccg 240  
tcttcttcca ccgacgaaga gttgagccct tccccgtcgg tatccatcga cgaagttgcg 300  
tcccctgtgt ctgatggggc agcttatgga tcggggagc 338

<210> 3999  
<211> 328

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-026-Q1-E1-B9  
  
 <400> 3999  
  
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 ttccggcgggc gcgagctggc ggcgcacgac gggcgcatcc tggactacgg cgtggcggac 120  
 ggcaacgtgg tgcacctggt catccgcgtc ccggacgtgc gcctcatcac cgtggagacc 180  
 gtgcaaggcg gcaagttcaa gttccgcctg gagcccgggc gcaacgtccg gtacgttaag 240  
 caacagattg ccaagggcca acccgccggc gcgccccccc gcgaacaacg ggtccttctc 300  
 caaggcgaag gacttcaaga acggcaac 328

<210> 4000  
 <211> 371  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-026-Q1-E1-C10  
  
 <400> 4000  
  
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 ggccgcccgc gaggggctcc ggcacggggg cgcgcgccgc gccgcgtgg ccgaggtggt 180  
 acaggggtgg acgacgacga caggtggagg agagaaggac taagtgggtg tgactggtga 240  
 tgccgacgcg attggcgctt gccacctgcc gcctgccgcc tgggtgccaca acgattgtcc 300  
 tcatccagac caactccaac ttgggcccgg ccaaacgatt cgtttggttc ttggccttgg 360  
 gtaaaacttt g 371

<210> 4001  
 <211> 360  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-026-Q1-E1-C2  
  
 <400> 4001  
  
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ccggtttaaat ttctcctcga cgggccagcg caattctgtg gctcgatcga tcggtcggtc 120  
gtaaggcaag tgagcaagct atatatatat ataggagatt cttcgagcga gctagtagcg 180  
agatgggttc cgccgtcctc ttttactgca tctgcatcgc cgtcgtcgtc gcattgtcgt 240  
cgtccatggt cgccgtcggg gccgccgccc cgggggaaac cccaagtgc atctcggcga 300  
gcgcccttga gtgctccgct aacgtaacgg aaatagcaaa ggcgcgcaag ctgatcgatg 360

<210> 4002  
<211> 341  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-C4

<400> 4002

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cgacgacggg ccccggcggc tggtagagga ttgagatcag cggcgaccac caggacgaga 180  
tctgcgacgt gcgcctgctc aagagccccg aggcggactg cgccgagatc gaccactccc 240  
gcgaccgctg ccgcgtcccc ctcaaccgca acgacggcat caagcagagc ggcgtccgct 300  
acgccaaacc catcgcttc ctccgcaagg agccgctccc c 341

<210> 4003  
<211> 322  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-C5

<400> 4003

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cactgaagca gatgcacaca gatactttca gtagcttata gacggtgttg atttttgtca 120  
caagaaaagg agtctaccat tgagacttaa aggatgctta gtgggtcaac tgtagggatc 180  
tttccttcta catacgacct atgggactcg ctttttggtg ggtgcccgct cgatgccacg 240  
gaacataaat tgcgaacctc caatggactt catttgagac aagtgatgcc caagaaaatg 300  
ggggtaaact gacacagcta tc 322

<210> 4004  
 <211> 350  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-C6

<400> 4004

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cattgcattg caggctcgtag ttgagcagca gcaaccactg cacaggatgt cgtggcagac 120
gtacgtcgat gagcacctca tgtgcgagat cgagggccac cacctgagct ctgccgccat 180
agtcggccac gacggcgccg tttgggcccga gagcaccgca ttcccacagt tcaagccaga 240
ggagatgacc aacatcatta aggacttcga cgagcctggg tttctggccc cgatcggcct 300
cgtccttggc cccaacaagt acatggtcat ccaaggcgaa cccggggctg 350
  
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<210> 4005  
 <211> 455  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-F8

<400> 4005

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cgccctggcg tccgcgtcc ttggtgcggc gccggccgcc gcgaacgcgc cgggcggggc 120
gttcagcaac tgggtggcga tgaaccagca gagctacgcg ctgtacgcgc agaagtccgt 180
cggggacggt ggcaaggagc ccctggacaa taagctgtcg gaggcggaga agaagaaggt 240
cacgtacgtg gtggacccca gcggttaagg cgactacacc aacatcacgc cggcgctgga 300
ggatatcccg gtgagcaaca ccaagcgcgt gatcctggat ctcaagcccc gcgctcagtt 360
ccgcgagaag ctgttctga acatcagcat gccgtgcac acgttccggt cggaccccat 420
gaagcccgcc gtcgtggtct ggaacgacac tgcgg 455
  
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<210> 4006  
 <211> 373  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-013-Q1-E1-F9

<400> 4006

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 tcggcaatgc cacacccagt gatcagaggg acattgagaa gccttttaaa gtgaaggagg 180  
 cagaacctgt gaatgtgaca aaaccttcac cacacaagct gctggttcta ngangaagtg 240  
 gtttcggttg atcacacgtt tgcaaagagg ctttggacaa aggtttagtt gtctctagtc 300  
 ttaatagatc gggaaagcca tccttaaatg aaccttgggc tgacaaagtt atatggaacc 360  
 aaggcaacct cct 373

<210> 4007  
 <211> 455  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-G1

<400> 4007

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 gtcgccatgc tagcgggtggc cgccgatgtc gccaacgccg gccacgcaa gcccctgaag 120  
 cctggcgggc gcgtggtaca cgacaaccac ggcaagttca cggccggggc gtggaaacca 180  
 gccacgcga ctttctacgg cgggcgggac ggggtccggca ccacggcggg cgcggtgcggg 240  
 tacaaggaca cgcgcgcgca ggggtacggc gtgcagacgg tggccgtgag cacggtggtg 300  
 tttggcgacg gcgcggcctg cggcgggtgc tacgaggtgc ggtgcgtgga cagccccagc 360  
 ggggtgcaagc ccgacgcggc ggcgctggtg gtgacggcga ccgacctgtg cccacccaag 420  
 gacaagtggg gcaagccgcc gcaggagcac ttcga 455

<210> 4008  
 <211> 401  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-G11

<400> 4008

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agaaattgtc aagaagacat actgtttgaa gatcaggcaa gagctgatgc atcgcttcc 120

agctgtgacg agtcgagtgg tgtagcaagc cttaaaattc agatttctct gttgaatata 180

agactgaggg cacttgaaga ggatcaggag ttcctcaatc aggtattgag ttcgctccaa 240

tgtggtagtg atgggctgca gtgtatacag gagataagca ggcacttagc agagttgcga 300

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atgaggttct cctttgtaac ggcaaacta tttgcagtca t 401

<210> 4009

<211> 405

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-013-Q1-E1-G2

<400> 4009

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agaaccacgg gcccggcgcc aacatgagcg aacgcgtaaa gtggaggggt atcaagaaca 120

tcacctacca gcacgcgctg cagaagtaca ccgtcgagag cttcatccag ggccagcact 180

ggctcccaca gctcggcgtg ccattcatcc cggggctgct gccgcagcag caatcgggca 240

ggatacactg acatctaagg aagataatat atgatcggca ggctgcgttg tcgatatgac 300

gtggcactaa catgtacgta ccatggttta gtttgttggg ttggtttatgc tattttgact 360

actacttttt ttatatttga taaaaaatg cagtacaaaa ttaan 405

<210> 4010

<211> 385

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-013-Q1-E1-G5

<400> 4010

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attgtggtgg aaactgtgta atccgccaat ccggtgcgga tctgcacaga gaaactctgg 180  
tggtctgtgt gactaatgaa aagtgggttat tctggcttgg ccgttgtcca tcgagggaga 240  
tgtaatacct gatcagccct gaaatcttaa agggctccct tctttcctca tgctgggaca 300  
acatttattt acatcgggtg tgtacttggg gttctctcca tcaccgaata tatgtcggcg 360  
tgattgctgg tatctaaan aaann 385

<210> 4011  
<211> 459  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-013-Q1-E1-G6

<400> 4011  
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gagggcggtc gagagaaacg agagcggcag acaccatggg gagctcgagg accatcgttg 180  
cgtccccct gctcctctc gccctcctcc tcttggttt cgcggccacc gccgaggccc 240  
gcgttgtccc cgagctgttt ggcgaggacc aattccagcg gacatgcaac caggtgcact 300  
tcaggaagat gtgccagagc ttgacgaggc tcccgagggt gaccacgccg cgcgagctgc 360  
tgctggcgtc gatgcgcgtc gcggcggaga aggccangga ggccaagagc ggggtggacg 420  
agttcgggc gaggaaccac gagggccggc cgatggagt 459

<210> 4012  
<211> 445  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-G7

<400> 4012  
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actgggtggc gatgaaccag cagagctacg cgctgtacgc gcagaagtcc gtcggggacg 180



ggggcaagga gccctggac aagaagctgt cggaggcgga gaagaagaag gtcacgtacg 240  
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 cgggtgagcaa caccaagcgc gtgatacctgg atctcaagcc cggcgctcag ttccgcgaga 360  
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 ccgtcgtggt ctggaacgac actgc 445

<210> 4013  
 <211> 448  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-013-Q1-E1-G8

<400> 4013  
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 tgatggccag attaactacg aggagtttgt taaggatcatg atggccaagt gagccacaga 180  
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 cttatttcat cgaattccag tgaaacattc tgctagttgt agtttttgaa aggcaatgca 300  
 gttgctgctt tgttcttccc tccagtgtgt tttcagaact gttgattcat gtgaaactgt 360  
 aatgattgcc ctccctgctg tgtcttggtt gcagttgana ccatatgtag ctacattccc 420  
 cctcccacca cctccacaca tcaacttc 448

<210> 4014  
 <211> 397  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-013-Q1-E1-G9

<400> 4014  
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 ctaggactgg tgtacaaaga aaacttcact tggatcgtca gccaccgcag aagagtacaa 180

aaccgaccga gaacagcaat aagctagcta caaatcgggt cccagcccgg aacagcccag 240  
ggaatcctgt acttaggcat tcacgcagct tgcctgaaac tggtcgacga gcagtacaga 300  
aggtctcatc aatcacagag aaactgtcgc aaatgtcggg gacctccaga acacgaagcg 360  
ccgtgaagcc tgcncgcccg acgatgaaag ccggaca 397

<210> 4015  
<211> 455  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-013-Q1-E1-H3

<400> 4015

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atcgacgacg gcacaaaggt ggcgggtgaag cgcggggagcg cggagtcga gcagggcatc 180  
aacgagttca acacggagat ccagatgctg tcgaagctgc ggcaccggca cctggtgtcg 240  
ctgatcggct actgcgacga gaaccaggag atgatcctgg tgtacgagta catgcacaac 300  
ggcgtgttcc gggaccacat ctacggcagc gaggggaagg cgcgcgtgcc gtggaagcag 360  
cggctggaga tctgcatcng cgcgggcgcg gggctgcact acntgcacac gggcacggcg 420  
caagggatca tccaccgcga cgtgaagacc accaa 455

<210> 4016  
<211> 443  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-H5

<400> 4016

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cctagccgtg gtatgtgccg tatgcacagc gaaaaggaca ggagccaaga aggaagaatc 180  
ggcggcagcc cctggtggtg ctgctggagg cagcggcggg acgttcgaca tctccaagct 240

cggcgcgacc agcgacggca agacggactg cacaaaggca gtccaggacg cgtggacgtc 300  
 agcgtgcgaa gcgaccggaa ggcgccagggt ggtgatcccc aagggcgact acctggtcgg 360  
 ccctctcaac ttactgggac catgcaaggc cagcagcatc gccatccagc tggatggcaa 420  
 cctgctggga tcaaacgacc tga 443

<210> 4017  
 <211> 324  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-013-Q1-E1-H7  
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 aaccaagggtg gccaacggga acgactctgt ccgctatgaa gacaggacag tgggaggga 120  
 agaggaagtc gttgaggcga tcaaggcaac agggcggtgc aacctgttcc tcgtctgaca 180  
 gggcacgcac tgcattgccg tgggtgactg gaccacggac agcccgagc tcgtgccggt 240  
 gggactttac ctggcgctgc cggaattctc gacgggtggca tctgtgctgg tcatgaaaca 300  
 gtacgatccg atggcgaagc acga 324

<210> 4018  
 <211> 162  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-014-Q1-E1-A1  
 <400> 4018

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 aaaagactac ggggatgcac atgttccagg tgcaccaggc ggatgcgtag ctgctgttct 120  
 tggttgtgtt ggctccgtta cccgggtcac ccaggggacc tc 162

<210> 4019  
 <211> 440  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-014-Q1-E1-A3

<400> 4019

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ggaaccgagg accgcgcaaa cggcttcatg cacaacttca agaacacaac caatttcggc 120

ctcatggccg tcagcctcgg ctactacgaa acgctcatgt cctgctccgg aagcagcacc 180

agcatcgaga tgccgcccga ggaccgcgcg cgcgcgggca tctcaccggg cctcgtccgc 240

atgtccgtcg gctacaacgg cacgctggag cagcgtggg cgcagttcga gcgcgcgctc 300

gcgctcatgc aaactccgaa gccaagcaa catcctcaag ccgccgccgc cgaccgcgac 360

ggccccgaag ccgccaacat acagcaccgc aagcaactgac gcgcttgccg ttccgagcgt 420

gcatggcctg tgtgggactg 440

<210> 4020

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-A7

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tctacgcgtg gataacctgg tcatcaccgg caagggaaac cttgacgggc agggcccagc 120

tgtgtggagc aagaactcct gcaccaagaa gtacgactgc aagatccttc ccaactcgct 180

ggtgatggac ttcgtgaaca acggggaggt gtccggggtc acgctgctca actccaagtt 240

cttccacatg aacatgtacc ggtgcaagga catgctgac aaggacgtga ccgtgacggc 300

gcccggggac agccccaaaca cggatggcat ccacatgggc gactcatccg ggatcaccat 360

caccaacacc gtcattggcg tcggcgacga ctgcatctcc atcgggcccc ggacctccaa 420

ggtgaacatc accggcgtga cctg 444

<210> 4021

<211> 262

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-A9

<400> 4021

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 cccggccagc accagcagcc atggagatga agaaggctct ctgcgcgcgcg ctgcgtcgccg 180  
 ccgcctccgc caccgccgtg ctggccgagg tcgcctccga gtcgccctcc gaggcgcccc 240  
 ccggcgcggc cgctctagag ga 262

<210> 4022  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-B10

<400> 4022

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 cagctactct actatcatca catggaactt gattgtcata ttggttggtgc tatctctcta 180  
 tgctacctac agccattggc atcaaaggctc taccgaagac ttcgaaatgg agcttcatga 240  
 agctgagctt gctgtgagac cggaggattc aaaaatgata agtagaccaa gatatgcggt 300  
 aatgaacacc gcaaaagggc caattactat agaaatatac aaagatgctt ctgctgacgt 360  
 tgtggataga tttatcaact tgtgcaagag ttatcatttc aaaggaatgc catttcggca 420  
 tatcat 426

<210> 4023  
 <211> 452  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-B12

<400> 4023

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 acggcctgcg catcaagtcg tacgaggact ccaagtcgtc gctcaaggcc accaagttcc 180  
 tgtaccagga cgtcaccatg gacaacgtct cctaccccat catcatagac cagaagtact 240

gccccaaaca catctgcgtc aagtccggcg cctccaaggt ggccgtcaac gacgtcgtct 300  
tcaagaacaa ccacggcacc tccaacaagc cggaagccat cacgtcgaac tgcgccaaca 360  
acctgccctg ccagggcgtg cagctcatca acgtcgacat caagtacaac aggtccgaca 420  
acatgaccat gtccgtctgc aagaacgcca tc 452

<210> 4024

<211> 444

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-B6

<400> 4024

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aggccataga cgccatctgc aagagccacg gaacaccacc agatgagaag attgccatca 120  
ccaaagctat tataaatgta tcgaatggat ccaagcccc actctttgct ggcatcatag 180  
cacttgtgat gagcatcgca acgatggtec gtctgacctg cagcatgatg cctgggaagg 240  
ttctcggtgc tgccataggt ggagctaccc tctcagaagg taaatcaaaa gtacaagagc 300  
gccagcggtc caagctatca gaagaggctg tggaggaagc tgaagacgcc gtctctgcaa 360  
agcgctcttc ggagcttgag gagaaggtea ttgcactcct gacaaaaccc gcatcaatgc 420  
ctgctgataa ggangagggt ctgc 444

<210> 4025

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-B8

<400> 4025

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accatgtggt cgtcgatgcg ggcacagggt gcgatgggtg tggcggttgg gttcttggtg 120  
agcggcgcat ggtgcgggtc tcccaaagtc ccccaggca agaacatcac ggccacctat 180  
ggcaaggact ggctggacgc taaagcgaca tggatatgga agccgacggg tgccgggtccc 240  
gatgacaacg gtggcggtg cgggtacaag gacgtgaaca agccccctt caatagcatg 300

ggcgcacgac gcaacatccc catcttcaag gatgggtctgg gttgtggggtc ctgcttcgag 360  
 atcaagtgcg ataagcctgt ggagtgtctc ggcaagcccg tgggtgggtgca cataacggac 420  
 atgaactatg agcctatcgc ggcgt 445

<210> 4026  
 <211> 437  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-014-Q1-E1-C11  
 <400> 4026

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 ccccgaggcg gactgcgccg agatcgacca ctcccgcgac cgctgcccg tcnegctcac 120  
 ccgcaacgac ggcacatcagc agagcggcgt ccgctacgcc aaccccatcg ccttcctccg 180  
 caaggagccg ctccccaaact gcggcgagct gctccgcgcc tacgacctct acaacgagac 240  
 gtccgagaat tcctaagcgt ccaaacaaaaa gttctctcgc tcgctttttt tttaaaaaaa 300  
 aaatcccata tacatatagc acatttggtt cggtttgttg atgcgcgcat gcatgctagc 360  
 agacatcttt cctaaaaaaa atttaataaa tttccatctc gcattatctt agtagctacc 420  
 attcatgttt tctgagt 437

<210> 4027  
 <211> 440  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-014-Q1-E1-C2  
 <400> 4027

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 tcggaggctg ccgtcgctcg cgtcggccgc ccccgccggc cagcgagagc gagggacaac 120  
 gaccgaccga ccgaccagct cgaggatgaat gaacagccgc ataccgttcc tccagaaaat 180  
 gcaccgctgg atcatcccta gctgcggcga caccgcccag ccgcgccctt cctcccgcca 240  
 tcgagatgcg ttcccaggcg cggcgctcggc gtcggcgctg gcgtcggcgg ccccgctccc 300

tcagaagctg aggaaggtgg ggtcggaggg gacgctggtg ctgtccgtgc ccaaggacgt 360  
 agaggagatc cggaccatgt cggcgtacgg ccgcctcaag ctcttcacct accacgagct 420  
 caggaaggcc accggcaact 440

<210> 4028  
 <211> 240  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-014-Q1-E1-C5  
 <400> 4028

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 agtgccaggt caagatcagg tactgcagga tgaggcgcat ggtggatgct gtgatgagtt 120  
 cgtgagtggg ctaggccgtc gtctcccagt caactttggg ttgctggacc gttgtctcct 180  
 tataatgtaa ttatttattt tgtatataac tccgattata tagtaaagat gtgacattca 240

<210> 4029  
 <211> 427  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-014-Q1-E1-C6  
 <400> 4029

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 tcctctcct cggactcagc atggtcgccg tcgtcctggc tgccatcgcc acagtagcgc 120  
 tcgcggagga agccgatccg cgggcactgc cggcacagtg gaccaccgcg aagaagtaca 180  
 aggccacgat ggacgccaag acgcggcagg ctttcgacgg cgtggtggcc gccgctacgg 240  
 cagagaagcg gtcccaggcg gtggaggccg tgctgcagca gcagctgaac atggacgtgt 300  
 ccctgtccaa ggcgacgtct tccggggacg agaacaacta cgtgagcgtg gccgccgcct 360  
 acgagaaggc cgcggggcgc gtcacgcgg cgacgccgga caacaagctc cgcgctatgg 420  
 cgttcgc 427

<210> 4030  
 <211> 435  
 <212> DNA



<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C7

<400> 4030

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tgtgaccacc gatgtggcgc aggcggcgag ggaatgcgag aaggacagcg agcgattcct 180  
tggggcatgc atggcgctcg acaactgcgc caacgtgtgc cgcggtgagg gcttctccg 240  
cggcagggtgc agcaccttcc gccgccgtg catctgcact aagccgtgct aaattaacct 300  
actcccggca gttcgatggt ggacgtttat tctatttatt ggcttacttg attttttccc 360  
ccctaacaat aagaaaacgc acgtgctggc atgtacgttg tgttgatat gcttttcttg 420  
ctggcttcat ttgct 435

<210> 4031

<211> 450

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C8

<400> 4031

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ccgagccgtg cgggggctcg ggacgggaac gggacaggac cccaaaatct cagatccttc 120  
ctgcccgcc gcccgtgccc gtcgacgcgt cgttcttgcc ggccgcgcct cacctccgcc 180  
ctctcctcct ccaggggat cggtacgcc acaggctgcg cgatggtgct gtgggtcttc 240  
ggctacggct ccctcatctg gaaccccggc ttcgacttcg acgacaaaat cctcggcttc 300  
atcaagggt acaagcgac ctttaatctc gcttgattg accacagagg cacaccggag 360  
catccggcga ggacctgcac gcttgaaacc gacgacgagg ccatatgctg gggaattgca 420  
tattgtgtca aagggtggtc agaaaaagag 450

<210> 4032

<211> 448

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D8

<400> 4032

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ggcgtccccc aaggcgcgga cgggtgctgga cctgtgcaac aacctgtacc tggacgtgga 120  
ggacaacctg ggagcctgcc gccgcgccat cggtttcaag gacgccgtca ccatccgcgc 180  
caccatgggc atggcgcgcg aggacatgca gaactgcgac gagcagttca ggcagatcgg 240  
cgagaagaac cccatggagc agttcgacgc gtcgctcgtc gagatgtccg agaactgccg 300  
ctcgctctcc aacatgatct gatcgatctc cttctccacg gacgacaaca gagagccggg 360  
cgttttgggc cctcgcatcg tttgtcgccg ctgctaacgt tcgcatgccc atgcccgcg 420  
gcgcgctctc gcgcgacaat aactgatg 448

<210> 4033

<211> 447

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-E1

<400> 4033

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gcgacttctt tgtcggacaa ctcaacttca caggcccttg caagggcgac gtgaccatcc 180  
aggtggatgg caatctgctg gcgaccacgg acctaagcca gtacaacgaa catggtaatt 240  
ggatcgagat tctacgcgtg gataacctgg tcatcaccgg caagggaaac cttgacgggc 300  
aaggcccagc cgtgtggagc aagaactcct gcaccaagaa gtacgactgc aagattcttc 360  
ccaactcgct ggtgatggac ctcttgaac aacggggagg tgtccgggat cagctgctc 420  
aactccaagt tcttcacat gaacatg 447

<210> 4034

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-E12

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ccgtcgcctt gtctttcttc gtggcgtgtg tggccgccac cgtcgcgctc gcgtcgtcca 180

tgtgctcggc atgcggtcgc aagccgaagg cggccacccg tgcagaccg gccgcttcgg 240

accagtccac cgggacgggc tcgggctccg tctccggtgg cggcggaagc caggaggcta 300

gcgccgcgga agccgaagag gaagtgggtg gactgtcacc ggagctggcg atgcacggcg 360

ccatcgaccc ggtgacgctg ccgtcgtcga cgtcgaagcg gcgcctggtc atcagcgtga 420

gc 422

<210> 4035

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-E2

<400> 4035

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gcatgatgtg gacgctggta ccttgaagaa cgttgttctt tctgatgggtg cagtcgtaac 180

agtgaagggt gctagagctg tgagcctccg gttgccgctt gaattaccac ttcctctcaa 240

ccgtaccact tacaagggtc gcctctcaag cctgatatcc atcgacaag ccctgcgtgg 300

tgcagcccgg tctaatacaga aacctctgct ctctcttcgc gttgagggtc cagtttcctt 360

gtcctcgact ccttccatgt ctoccaaagga caagctcaag ctcaaacggt tggccccagg 420

cca 423

<210> 4036

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<212> DNA

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<223> Clone ID: LIB148-014-Q1-E1-E3

<400> 4036

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 ctccccctcg tcaccccacc acatccggcc agcccaacga aaatgtcgcg cgccacagct 120  
 gcgggtcctct tctacatcct cgccgtcgct gccctcagcg cggccgaggc accggcagag 180  
 tcaccgaagg caggcagtc tgccaaggca ccggccgagt caccgaaggc aggcagtcct 240  
 gcagctcctg ccaaggcacc cgagtctgct gccacgagaa ctgccccgc taaggcacct 300  
 caagccgcct ccaacccgc cgttgccgt gccccatcgt cgtcgtcgtc taggaagtct 360  
 ggtccagctg ccgcgccgac caccgccgcc tctacaccgt cttcttccac ggacgaggag 420  
 ttgagccct 429

<210> 4037  
 <211> 436  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-014-Q1-E1-E7  
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 gacaaccagc tggcgcgga gccgcggcgc tgggtccaacg ccatgcgcaa ggactgccag 180  
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 gccaccgcca gggaggccgt cttctggtgg ggcaaggagg aggccatcta cgacaaggag 300  
 aaggagaagt gcaagtacgg caaggtcttc aaggagtgcg gccacttcgc gctcatggtc 360  
 ggcaagagga gcaccaatgt cggctgcgca cgagccgagt gcttcaaagg cggcgtcttc 420  
 atcacctgca actact 436

<210> 4038  
 <211> 438  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-014-Q1-E1-E8  
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gccgcggcgg ccgtgctgac cacggtgccc ggcgtcgcgc tcgccaagtc gaagctcgcc 120  
 aagaagagcg acgacgtcgt gaacgggccc ctctgaccg agaagatcca ggccaagaag 180  
 acgctgatcg tggggccgga cgaggagttc aagaccgtgc agtccgccat cgacgcggtg 240  
 cccgccggca acgccgagtg ggtcatcgtc cacctccgct ctggcctgca caggggcaaa 300  
 gttgtgatac cggagaacaa gcccttcata ttcgtgaggg gcaacggcaa aggccggacc 360  
 tccatctccc acgagtcgc ctcttccgac aacgccgagt ccgccgcgtt caccgtgaac 420  
 tcgggcaacg tcatcgtc 438

<210> 4039

<211> 458

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-E9

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 accgtaccag ctagccacca cacgcgtagc gcgggaaatg ccggcggcgg cggccatgac 180  
 gacgaggcgg gtggtgctgg aggtgctacg gtcggcctcc cgcgacgcct tccaggtggc 240  
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 cctctaccac caccaccag acaacgacta atctggcgca gatctacagc acggccgctc 360  
 gcatgccttc acagcccgtt ggggtgtgacg actattgatg acgtactacc acatttcgtc 420  
 gtcctattc tagtaagcaa cgcaaaagaa aatgttgt 458

<210> 4040

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-F6

<400> 4040

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gcggtggcgg aggaggtggg ccgctggggc agcatgaagc agacgggggt gaccctgcgg 180  
 tacatgatgg agttcggctc ccgccccacc cagcgcaacc tgctcctctc cgcgcagttc 240  
 ctgcacaagg agctcccat ccgcttcgca cgcgcgcgc tcgagctcga ctgctgccc 300  
 ttcggcctct ccaacaagcc cgccatcctc aaggtgcggg actggtacat ggactcattc 360  
 cgggacatca gatacttccc tgaagtgagg agcaagaacg acgagctcgc tttcacgcag 420  
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<210> 4041  
 <211> 384  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-014-Q1-E1-F7  
 <400> 4041

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 cactctacat gtctctgtgg tgtctcagcc tcttgtgttt tacactctag agctcctagt 180  
 accgccgatg taagatttgc tatctgcaat gtgctcatgc aaccagcgtg tgtgcgagtt 240  
 aatagtttgc acgaaaccg ctatcaatct tccctagata ttttgttgta ccaatgaatg 300  
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<210> 4042  
 <211> 436  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-014-Q1-E1-F8  
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 acgtttcccg gggggccggg ggagagagag gcagaaggag gaggcacgga gaggcagaga 180  
 caggatgctc gggttcaggc agatgccgtg gtcgtcggcg caggagcagg agcaggcgcc 240

gtcggagcag ctgtgcgagg ggggtgtcggc cgtcgtggcg gcgcgccagg ggatggagaa 300  
gccgctgacg gctgtggcgg aggcgttcga ggagctggcg cgcggcatgg aggccgatgg 360  
cggggagctc cgctcgcctc ccttcagcga ctctgcgct ctcgtctccg tgctcttcag 420  
cagcctcggg gatggc 436

<210> 4043  
<211> 306  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G1

<400> 4043

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gcatgaaggt gacgcccggg tccgcaccac cgcagatgcg caggaaaccg tagtgctccg 120  
cgtggacaaa gccgccgggt taccacggtc atggggcatc aacatcgaga aatcggacgt 180  
gtccgctata cacctgacgc tcaggccgtc ccacaaggcg atcatgttcg acacggccac 240  
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<212> DNA  
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-G11

<400> 4044

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atcgagggcc accacctgac ctccgctgcc atagtcggcc acgacggcgc cgtttggggc 180  
cagagcaccg cattcccaca gttcaagaca gaggagatga ccaacatcat gaaggacttc 240  
gacgagcccg ggttcctggc cccgaccggc ctcttcctcg gccccaccaa gtacatggtc 300  
atccaaggcg agcccggcgc tgtcatccgc gggaagaagg gatctggagg cataactgtg 360

aagaagacag ggcaagcgat ggtggtcggc atctacgacg agcccatgac ccccggccag 420  
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<210> 4045  
 <211> 435  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-014-Q1-E1-G3  
 <400> 4045

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 tttgagtgga tcatggacgg attggtaggc ctcttgaaag tccgggtggt gaggggcatc 180  
 aaccttgccct accgcgacgc aagaggcagc gatccgtatg tcgtcctacg acttggaag 240  
 aagaaactta agacgagcgt gaagaagaga tctgtgaacc ccactctggca cgaggagcta 300  
 actctgaccg tcacaaattc cagcctaact ctgaagctgg aggtgttcga caaggacacg 360  
 ttcagcaagg acgacccgat gggggacgcg gagatcgacg tggcgccgct ggtggaggcg 420  
 gcgaacgcga gcccg 435

<210> 4046  
 <211> 451  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-014-Q1-E1-G5  
 <400> 4046

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 ctgcggcacg atggacgtcg agttcagaag ggtgccatgc aagtaccccg ccgggcagaa 180  
 gatcgtgttc cacatcgaga agggctgcaa ccccaactac ctggccgtgc tgggtgaagta 240  
 tgtggcggac gacggcgaca tcgtgctgat ggaaatccag gacatgttgt cggctgagtg 300  
 gaagcccatg aagctctctt gggggcgcaa ccggaagggt gacaacgcca aagcgtcaa 360  
 tggccccttc tccatccgcc tcaccagcga gtccggcaag aaggtcatcg ccaaagacgt 420



catccccggcg aactggagac ccgatgccgt c

451

<210> 4047

<211> 377

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G6

<400> 4047

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ctcctcgtct ccaactgcgtc cgctgcacgg accgtgggcg acaccgtgca ggacgcgtgc 180

agcaagacac aattccccaa gatctgcgtg gacagcctca ccgcaaagcc agagagccag 240

aaggcgaccc cgcgccggct ggccggagctg ttcgtgaaca tcgcggccga gaagggatcc 300

gggatggcca cgttcgtgca cgggaagtac aacaacgcca aggacagcac cgtgttcaag 360

tgctacgaca gctgctc 377

<210> 4048

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G9

<400> 4048

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ggtgctggtg ggcaaccgc gcaagggctg ccaccaaggc caagcgctca aggaacgcgc 120

cggggtcctg gtcaacaaga acgttgggat ctccgacaac ctggggccccg gcaaaccgct 180

aaggtagctt aagggccttc cgctccccgt ttgcgccgcg ctggtcaagc aactggactc 240

cggcgaagac gacgaccaat taactatacc aaggggggggt tcccggcatg ctgcacaaaa 300

ctacaacgat tcaaaacgaa cgcattgggat gggttaacaat ttctacggga agaaaaggga 360

gaaaagggaa attaaaaatg tttcaaatg cctgattcc 399

<210> 4049

<211> 441

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-H1

<400> 4049

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gccatgttct ctaacccaac cccatcaaca aaaattatgg cccaataaac atctgctgca 180  
agtccggcgc ctcaaagtgt gccgtcaacg acgtcgtctt caagaacatc cacggcacct 240  
ccaacacgcc ggatgccatc acgtcgaact gcgccaacaa cctgccatgc cagggcgtgc 300  
agctcgtcaa cgtcgacatc aagtacaatg gatccggcaa caagaccatg gccgtctgca 360  
agaatgccat cggcaagtcc atcggcttgg caaangagct ggctgtgcatt tgaaccaatt 420  
gactaacatg catatattat g 441

<210> 4050

<211> 443

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-H11

<400> 4050

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cgggggagcc gcggcgggtg cggagatctg catgaagact ccgtcccccg acctgtgcac 180  
caggacggcg gggaagcacg ccaacaagta caaggtggtg gacgcggtga cggtgctaga 240  
gatgcagggtg gacgcgttca agaagcgcgt gaaggcggcg cggaggctcg ccaaggagga 300  
ggtcaagacg gccgcgacgc ccgaggcgcg gagggcgctg aacctctgca agacctacta 360  
cctggacgcc gccgacaacc tcggcgcttg caagcgcgcc atcggcttcc gcgacgccgt 420  
caccatccgc gccacgatga gca 443

<210> 4051

<211> 449

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-H5

<400> 4051

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tgcaggatct aagcagagac ttgatttagt tatggacgga ttggtaggcc tcttgaaagt 180  
tcgcgtggtc cggggatatca accttgcta cgcgcacgca agaggcagcg atccgtatgt 240  
cgtcctacgg cttggcaaga agaaactgaa gacaagcgtg aagaagagat ccgtgaacct 300  
catatggcaa gaggagctaa ctctgaccgt cacagattcc agccaaccac tgaaagctgg 360  
tgagtgagca gcaagcagaa cgatcctgtt tgtgattcat tattctagac tgtttgctac 420  
aggaagtgtt ccacaaggac accttcagc 449

<210> 4052

<211> 320

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-H6

<400> 4052

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tccgccggaa ccggcgccac cgcaagacgg ggaaggagag gacaactagg aggaagggac 180  
cgccaccaat atatatcaca cacacacaca cacactcaca cattctcaca ctcaagtctg 240  
cgtttgccat ttttcttttc tttttctcta cgacttcggt attccctcct ttcattctac 300  
tctccgtgaa ctcggtttgt 320

<210> 4053

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-A5

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gctccgacga cgacgacgcg ccgccacagc cacatggcgg acgacgccgt cgccgccgga 120  
 gcggccggttt gctgcgccagg gccggcctcg ctgtcttcta gcaggaagca gcagcagcag 180  
 cccgacgacg ccgggtgcgg cagcagcagc agcgacgacc actaccagca cgacgtgatc 240  
 atgctgagggc ggacgaggag cgggcgggca ttcccgccgc cgatctccgt gatcggcaag 300  
 ggcgggcgggc cgtggctctg cctgcgggcg caccgcgagg gtggacgcct cgtgctgcgg 360  
 cagatgcgcc tgccgtcgca ggagctgctg cagccctgca a 401

<210> 4054  
 <211> 402  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-A6

<400> 4054

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 ccgccgtcat cctatgcta tgcgtcgctc tctcctgtgc cgcggctgac gaccgaacc 180  
 tccccgacta cgtcatccag ggccgcgtgt actgcgacac ctgccgcgcc gggttcgtga 240  
 ccaacgtcac cgagtacatc gcgggcgcca aggtgaggct ggagtgaag cacttcggca 300  
 ccggcaagct cgagcgcgcc atcgacgggg tcaccgacgc gaccggcacc tacacgatcg 360  
 agtcaatga cagccacgag gaggacatct gccaggtggt gc 402

<210> 4055  
 <211> 434  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-019-Q1-E1-A7

<400> 4055

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 ttgtgacatg ggctacaccg aggcttagtg aagacaaggt gaggcaatgc gtcgatccaa 180

ggctcggaga cgaataccct ccaaaggctg tagccaagat ggctgctgtg gccgccctct 240  
 gcgtgcaata cgaggggtgaa ttccgtccca acatgagcat cgtcgtcaag gctctgaacc 300  
 ccttgtgtgca cagccgggtct ggcaaccgcc ctactgcctc gtcgggctcc cacgtgccg 360  
 cagcagcaga gcgatccgga ctgtgatctt ncatcgctgc gacaactttg gggtcacgaa 420  
 aaaggaccgt cttg 434

<210> 4056  
 <211> 398  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-A8

<400> 4056

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 tcttcggcga caaccagggc taccgcgagc tgtcggagct cgccgagcag gcgccaagc 180  
 gcgccgaggt ggccaggctc agggagctgc acacgctcaa gggacacgtc gagtccgtcg 240  
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 gtaaagattc gttcgtattt tcattttcac cggaaga 398

<210> 4057  
 <211> 422  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-A9

<400> 4057

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 cagttatctc accaccgctt cctgtggaat actcttcacc acctaatcca gtcaactcac 180  
 cggcaccacc tgtgaaaata tctcctccac taactccaat gggttcacca acgtctccca 240  
 tgaaatcccc tccaccaacg ggagccgtca gctcgcgcgc accgcctgta aatcacctc 300

ctccaccggc tctgtgatt tcaccatcaa ctccggtgaa aatcctccca ccaccggcac 360  
cagttagctc acctcccccg ccaattcccc ttagctcagc aaccccatth gcaaaatccc 420  
ca 422

<210> 4058  
<211> 386  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-B10

<400> 4058

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ccagcgacgc gaagtaaaca tgtctgaccg ggcaaagatg tctgtggcagg cgtacgtgga 120  
cgagcacctg atgtgcgaga tcgagggcca ccacctcgcg gcggcgggcca tcttcggcca 180  
cgacggtgcc gcctggggcg agagcacggc gttccccgag ttcaagaccg aggacatggc 240  
caacatcatg aaggacttcg acgagccagg gcacctcgcg ccgacaggcc tgttctctcg 300  
acctaccaag tacatggtca tccaaggcga gcctggtgcc gtcacccgtg gcaagaagg 360  
atcaggaggc atcacctga agaaga 386

<210> 4059  
<211> 398  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-019-Q1-E1-B4

<400> 4059

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caaggcgctg tgcccggcaa cctccgcggc cgtggcgggc gcgagggccg atgacgccct 180  
gcgccagcgc ccgcgggggc tctgtcangt ccgggagcgg gatcagggcc cgctgtcgac 240  
ggggcaccag cacctgcacc accatcacca ccagctgcgg cggtcggcgg cgttcccacc 300  
ccgccgcccg gggccggggc gccgccctcc tcagcgctgc gaaagcgacc tcaacatcag 360  
ggagcaccgc tctgtcancg aggtggccgg cggcaccg 398

<210> 4060  
 <211> 409  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-019-Q1-E1-B5  
  
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 cgcctcagtg acgacaacca gcctgctggc gctggcgctg gcagcgctgg ctttcgtctc 180  
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<210> 4061  
 <211> 387  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-019-Q1-E1-B6  
  
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 cgctggtgcc gggagcctcg ttccggctcg acaagggcga cccagcgcag cgcgcgaaca 240  
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<210> 4062  
 <211> 432  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-019-Q1-E1-B7

<400> 4062

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ggagtgttcc gtcgctttgt cagactactt ctggccttca ttgtcaaagt ctttgccttc 180  
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ccagaactga tttctgacga tcatccggca gtagagactt tcaatgtaga ccacatcagt 300  
cctgtcatag agcgccttca gagacttgaa gggaaggctg atgagcttgg cagcaagcct 360  
ccagcgattc ctgtggagaa agaacgatcc ctcttgaggt catgggatan gataaaatgc 420  
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<210> 4063  
<211> 380  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-B8

<400> 4063

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agcaagggcc taagaccttc actcagcgac atctgctgga gcagccgatc tgaggagaac 240  
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agtttactca cccctcttag tcgattgtta ttttaagtga gtctcttcgg agatgcaatt 360  
acagtccatc ctctctttct 380

<210> 4064  
<211> 406  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-C1



<400> 4064

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cggccatggc ctcgattccg gcgacgacct tcgccgtcat cttatccgtc ctcttctgtg 180
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aggtagggtt ggagtgaag cacttcggca ccggcaagct cgagcgctcc atcgacgggg 360
tgaccgacgg gaacggcacg tacacgatcg agtcaagga cagcca 406

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<210> 4065  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-C10

<400> 4065

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cgacgggggtg accgacggga acggcacgta cagcatcgag ctcaaggaca gccacgagga 180
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caaacagttg gactcggacg acgacgacga tcagtaatag cacatcgacg acgacgatcg 420
atat 424

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<210> 4066  
 <211> 235  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-C12

<400> 4066

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 tttgcggtaa ttttttgtct cgttgattcg atgaataaag ggcatgcttg agagt 235

<210> 4067  
 <211> 393  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-019-Q1-E1-C2  
 <400> 4067

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 aaaaaacggg gaggtgtccg gggtcacgct gctcaactcc aagttcttcc acatgaacat 180  
 gtaccggtgc aaggacatgc tgatcaagga cgtgaccgtg acggcgcccg gggacagccc 240  
 caacacggat ggcatccaca tgggcgactc atccgggatc acgatcacca acaccgtcat 300  
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<210> 4068  
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 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-019-Q1-E1-C4  
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 gcttgcaaaa agcttgggaa aattgagctc tcagactgcg aaatttacgc gtcctgcgag 360  
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ggcaaa

426

<210> 4069

<211> 431

<212> DNA

<213> Zea mays

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cgcagggccg gcgccggcct cgctgtcttc tagcaggaag cagcagcagc agcccgacga 180  
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<223> Clone ID: LIB148-019-Q1-E1-D9

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<223> Clone ID: LIB148-019-Q1-E1-E10

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<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E11

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gcaggggaac cgcgttcccc gacatctgca ccagcacggt ggggagcgaa gcgcagagcg 240

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cggtgctgga cctgtgcaac aacctgtacc tggacgtgga ggacaacctg ggagcctgcc 420

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<210> 4079

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E2

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<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E3

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accgccgggc ggcacgcgtc caagtacccg gtcacgaca acctggccgt gctgaacatg 300

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<223> Clone ID: LIB148-019-Q1-E1-E4

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ggcaactttg cctccgttgc tgcacaatgc ctacagaaac tccccgcaa caacaatcgc 180

ttcaactaca attgtgatgg gcacacattc aactaccaca tttatgatgg attcacgtac 240

tgctgcgttg ctaccgagtc agctggtcgc cagcttccag ttggatttat tgagagagtc 300

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<210> 4082

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E6

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<210> 4083  
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<223> Clone ID: LIB148-019-Q1-E1-E7

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 cactatttct gctcaciaag aactgaaaga cctgaaggat gcaattattc cagaagggaa 240  
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<223> Clone ID: LIB148-019-Q1-E1-E8

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<223> Clone ID: LIB148-019-Q1-E1-E9

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-F6

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<210> 4091

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-F7

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438

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<211> 415

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<211> 349

<212> DNA

<213> Zea mays

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ggatTTTTgtg acgaacgtcc agatccgcgg catcacggct gctcaacagc aagttcttcc 180

acctcaacat cgtcgagtgc aagaacgtgc tgatcgacaa agtgaccgtc aaggcccccg 240

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G3

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acgattacag taaatgagaa tgacatcacc tgggtgcctac gacataagac atgttgattt 180

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<210> 4096

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G5

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<210> 4098  
 <211> 405  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-019-Q1-E1-G7  
 <400> 4098

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 cggccgaggg cccggcagag tcaccgaagg aaggcagtgc tgccaaggca cctgaggctg 180  
 ccaagagaac tgctgcccc gctgaagcac ccggagccgc gtccaccccc gtcgccgccc 240  
 ctgccccatc atcgtcgtct aggaagtctg gtccagctac cgcgccagcc accgcctcta 300  
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cgccccctgc ggctgagggga ccggtctgctg atgactccgc cgggtg 405

<210> 4099

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G8

<400> 4099

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cggcaactcc tcttacaccg agccctgcac ctacatcaac tccctcgcca tcggccccgt 120

cgccgcgctc gccgtccgag gcgtgcagct cgtcgccacg cagtgatcta tccccatgcg 180

tgcgtgtgtg tcccgctgtt tcgtttcttc cctgacatga tatgatttct actccgttac 240

tgatgattca ttgattccgg ccgccccgc attgttcatt atattaggtg acgtctgcgg 300

gcgcgtgcgg ggatccatcc aaatctctca ctgcgtattg tttctgtacg tacgtacgtg 360

tacgtccaag attataatga tactcataat aatctcgtcg c 401

<210> 4100

<211> 407

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G9

<400> 4100

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gggcccacgg caccacggcg gcggcggatc ccagtacggc caccagacac gcccgcacca 180

cggcgggcggg ggcggcgccc cgcctgtgag gcagcagacg tacaggatct actgcaaggc 240

tggggaggac cagtacagcc tcgcctcccg cgacggcaag gtctgcctcg tgcgcacgga 300

ccgtgatgac gacgcgcagc actggatcaa ggacatgaag tacagcacca gggatgaagga 360

tgaggaaggc taccctgcca tcgtcctcgt caacaaagcc actggag 407

<210> 4101

<211> 382

<212> DNA



<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-H11

<400> 4101

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tgtgggtgct gcggcgatct ggtcgaggac gaggagaggc gtgagcacct agaggccgcc 120

tgtgaccttg caaccacta cctctgccac ccctgcgccc tctgccagga gggtcgcgag 180

ctgcgcgcga gggttcccca ccctggattc aacaatgggc actccgtctt tgtcatgatg 240

ccgcccattg agcagaccat ggggcgtggc atgtgagcta ttccaccacc ttccctgccc 300

tagttttatc tgtgtctccc gtggtttatc atctgctgct gttggccttg atgtgtgatg 360

tgtcctttgt tcgtcagtaa at 382

<210> 4102

<211> 384

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-H4

<400> 4102

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agcggcgatg gcggagatcc cggatgatga cctgcgcctc gccggctcgt cggccgacga 120

gtcgggcggg ctgcgcgacg cgtgcgagcg cctgggctgc tttcgggtga ccggccacgg 180

cgcgcccgcg gggctcctgg ccgacatgaa ggccgcctg cgcgcgctct tcgacctccc 240

cgacgacgcc aagcgccgca acgccgacgt catccccggc agcggctacg tcgcgccttg 300

ccccgccaac ccgctccacg aggccttcgg gtcctcgcac gccgcgcgc gcggcgacgt 360

cgacgccttc tgcgcgcgcc tcga 384

<210> 4103

<211> 398

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-H5

<400> 4103

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agtcctatca ggatctcatg aacaccgtct aagctctgcc ttagatggac actacgacga 120  
gaagaggaaa tccaatgtgg aatacacaga ggacgagaag aaagccgtga tcgcggctct 180  
gaaaaagaag gctttgagcg cctcacagaa gtttaggcatt tccatgaaga gggggaggaa 240  
gagcagcaag gtgatgtcca tctcgattct ggatgagcgt gaacctgagg aggtgcaggc 300  
tgtggatgcc ttccgccagc ttcttgact tgaagagctg ctaccatcg agcatgatga 360  
ctaccacatg atgctaagat ttctcaaggg aagaaagt 398

<210> 4104  
<211> 420  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-019-Q1-E1-H6

<400> 4104

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ccggatacat cgagggtgag aagcaagatg ctgtacgca gctccaagga ccggttcaag 120  
agggagctgg atggcattca ggtggagcta caagcaaccg acccgagcga aatgagcatg 180  
gacatcgtca agtcgcgagc cctctgaaac agccccggcc gctgcacctg cacgctgcag 240  
gggcgcacatg gctcctgcat gcccggtggg cgtcgaatcc ttgcttgtgt gttgggaacg 300  
gtcttgtgtt ttctgtctct tgttttctct gaagcanaag ccttgcattc tgtatgagac 360  
tgtatgccat tttcaatctt tttctctccc catatctctg ccttagtccc gctacggctg 420

<210> 4105  
<211> 433  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F12

<400> 4105

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ggcggccgtg ctgaccacgg tgcccggcgt cgcgctcgcc aagtcgaagc tcgccaagaa 120  
gagcgacgac gtcgtgaacg ggccccctct gaccgagaag atccaggcga agaagacgct 180

gatcgtgggg ccggacgagg agttcaagac cgtgcagtcc gccatcgacg cggtgcccgc 240  
 cggcaacgcc gagtgggtca tcgtccacct ccgctctggc ctgcacaggg gcaaagttgt 300  
 gataccggag aacaagccct tcattcttctg gaggggcaac ggcaaaggcc ggacctccat 360  
 ctcccacgag tccgctcttt ccgacaacgc cgagtccgcc gcgttcaccg tgaactcgga 420  
 caacgtcatc gtc 433

<210> 4106  
 <211> 178  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F2

<400> 4106

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 ataaaaaatg tatcagagtg cttgattcaa acaaaaaaaaa aaaaaaacia aaaacaac 178

<210> 4107  
 <211> 433  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F3

<400> 4107

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 gggggatggg catcgctctg gcagactccg accacaacgg catcgggagc ttcgctggta 120  
 accgtgtgga tcaactacgtc agatgcgcca tgacaaatgc cttcgctaag gcattgggta 180  
 acgggctcag acaggggaac aacatggaca tccaacgcaa cgacaacacc agcgagatca 240  
 tggcagggat cgccaaggac actgagcacc tggctcagtt cgagctggag atgttcagcc 300  
 cggtgctgaa gctgtggcac ccgttcccgg gcgcgtccgt ggtgagcacg ctccacatct 360  
 gctacagcgt cttgctgaag cagtacatgt ccaaggcgac gtacctcatg aacgagctcg 420  
 tgcacgtgct gaa 433

<210> 4108  
 <211> 438  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F4

<400> 4108

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 gaccgcccgt ccacgagcca gggactttcg gccatggggg acggtggtgc tgacgacgcc 120  
 tcctcgccgc cgccgcatga cgggggcttc tcctacctcg ccgtcttcca caactacccc 180  
 ctcgtcgcgc cctgctcgg cttcgccgtc ggcagtgcca tcaagttctt cctcacatgg 240  
 tacaaggaga acaggtggga tcccaagcag cttatcggtc ctggtggcat gccatcatca 300  
 cattctgcca cggttacagc actagcagta ggcattgggt tgcaagatgg ctttaactgc 360  
 tccctctttg caacagcaac tatatttgca agtgtggtaa tgtacgatgc ttctggtatc 420  
 agattgcatg ctggaaag 438

<210> 4109  
 <211> 373  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F5

<400> 4109

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 ccgccgtctc ttgtgtctcg gaaccggaaa gcaaacaagt ccagtacgcc aagaagtacg 120  
 tgcaggactc caagaacacg acggacaaga ctatggtgcc gccaccgtg taccacccgc 180  
 cgcaggccat ggcgtccgca taccgccgc aacaatattg ttcgccgtac gcggcgtacc 240  
 cgcggcagcc ttacgggtac cctgtccgc caccgtacgg gtacaatgct gcttccccac 300  
 aaccggcgat gtacaactac gcagcacagc cggtagctgc accggcgagg catggcggag 360  
 gtatggggat ggg 373

<210> 4110  
 <211> 444  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F6

<400> 4110

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cctcatcgtc gggcgcatgc ttctcatcac gctcgtgctg gagggcgccc ctccggcgac 120  
cgccatggac tgcaaggccg ggtgtgacga ggtcacgggc cactccaca tgagcatgga 180  
ggactgcatg aagaggtgca aggagatcgc tgctaagcag gggcctaggg acccttacia 240  
ggataacaaa cttgacatcc catgaactag ttaatgctcc tatatcatct gcctatccat 300  
gcatgcattg cattgcgtat gcacactgtg cgtgcctgcc caciaagtgc gacaacacac 360  
cgatctcgat ggatttgtaa tcgtgtccac tcgatcgaga gatcgatcga tgcttggtat 420  
tatatttgta ttccacatta tata 444

<210> 4111

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F7

<400> 4111

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caccatggat cgtcgatcgt tcagcagcac aagagacgac aatggagacg acagtcctc 120  
gggtccggtc cgatcgattc ttgcttacgt gtacatagct gagggcgagg cgcagcacct 180  
acttaccat taacgtcatt gccagtgaga gtttcatcat aattttattt ttattaaaca 240  
agatgatata tcacgatatt tgatgacatg acacggtatt ataataaaaa aaacacaaaa 300  
ctaaaaaatc tcaaacaaat aggaacacac actaaaagaa tcatacatat ataacacgag 360  
aaaaggaaat aatgaaccg gtcaaaggcg ccaagtcaat tcaattcaag gggacgacac 420  
aaaaaagggg gggcccc 438

<210> 4112

<211> 336

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-G1

<400> 4112

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cgcgaaacgcg cccggcgggg cgttcagcaa ctgggtggcg atgaaccagc agagctacgc 120

gctgtacgcg cagaagtccg tcggggacgg gggcaaggag cccctggaca agaagctgtc 180

ggaggcggag aagaagaagg tcacgtacgt ggtggacccc agcggcaagg gcgactacac 240

caacatcacc gcggcgctgg aggatatccc ggtgagcaac accaagcgcg tgatcctgga 300

tctcaagccc ggcgctcagt tccgcgagaa gctgtt 336

<210> 4113

<211> 228

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-G10

<400> 4113

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atacgtccag gatgacgttc acccctgtcg taacagttcc cacacggatc gaccacgacg 120

actttcgcaa cagcgacga aagggaaggg tggatcgaac ttgcatccaa catcgatccc 180

aaatggtgct tcgcacgtac atgccatata aatacctata ttcgaccg 228

<210> 4114

<211> 450

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-G3

<400> 4114

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gatcttaatt acaggtcata gctaagcagg tctgacagga tgtcgtggca gacatacgtc 120

gatgagcacc tcatgtgcga gatcgagggc caccacctga cctccgctgc catagtcggc 180

cacgacggcg ccgtttgggc ccagagcacc gcattccac agttcaagac agaggagatg 240

accaacatca tgaaggactt cgacgagccc gggttcctgg ccccgaccgg cctcttcctc 300

ggccccacca agtacatggt catccaaggc gagcccggcg ctgtcatccg cggaagaag 360

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gagcccatga ccccgccca gtgcaacatg 450

<210> 4115  
<211> 356  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-G5

<400> 4115

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aggtcttgat gcgctgcagc acctcagact tgtctttcct ccgtccaccg agacatttta 120  
tttcgaagag ctaataattt tccggagcgt tgccttccca cggtaggttg aaccacagga 180  
tcaaaagtgc aaaaggccgc gacaggttga attgcaatgt ggtctgtcac agtgacacagg 240  
acctgcctca aggggtgaaa aatgtgaaat ctctgtgcagc atatccccga ggtgcgcac 300  
ataatctgca agggaaagag atactttcgg taaaacaaga cccgcggaac caacaa 356

<210> 4116  
<211> 442  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-G7

<400> 4116

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gcagcggcga gaagatcttc cgcaccaagt gcgcgcagtg ccataccgtg gagcgagggtg 180  
gcgcgcacag gcagggaccc aacctgcacg gcctcttcgg tcgtcagtca aggaacaacc 240  
tcgggtaagc ctaatccaag ggcaacaaga acatgggcgt cctccgggaa gagggcacac 300  
tgtgtgaata actcctcaca cccaagaagt atattccaag cgcacaaaga tggctcttccc 360  
ggggctcaag aagcctaagg agcgaaccga tctcatcgcc tacctcaagg aatccacggc 420  
ttaacttctt ctagctatct ta 442

<210> 4117  
 <211> 441  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-007-Q1-E1-G8  
  
 <400> 4117  
  
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 agcagagatc agatcatcca tcggcaatgt cgaacatcgg gcagtccttc caggccggca 120  
 aggctgaggc ccagggcgag taccaggcgg agcacgcggc gcagtgcgtc aaggacaccg 180  
 ccgcagccgc ggccgacagt ggcagctgc agcagcaccg cccaccggc accgttgagc 240  
 aggtggcgca gacgggccag ggcgtggcgg caggcgtcaa ggacacggtg gcgggcgcgg 300  
 cggttggcgt cacgaacacg gtggcggcgg tggcggcggg cgtcacgaac acggtcacgg 360  
 gcgcccgtgg cgggcgtcac gaacacggtg accggcgcgg cggccggtgt caaggacacc 420  
 gtgaccggcg gccactgatc g 441

<210> 4118  
 <211> 418  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-007-Q1-E1-G9  
  
 <400> 4118  
  
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 tctctatgtt ggtgatcaca tatacggaga tattctgcgg agcaagaaag ttctaggctg 120  
 gcggactatg ctggtgattc cagaactaga acaagagctg aagcttctct cagaatcaaa 180  
 gtctactcgt aaggagctta gacatcttag aatggagcgt gattcaattg aagacaaaat 240  
 ccatcatctt gaatggtctc ttaagcttga tgatatctca gaaaaccaga aggagaaatt 300  
 gttctctgaa catgacaatc tgctgaaaca gagagggcat gttcgtggtc ttcacaaaga 360  
 agctcagaag caacatcatc agaagtttca taagggtgtg ggacagctca tgaagact 418

<210> 4119  
 <211> 424  
 <212> DNA  
 <213> Zea mays



<223> unsure at all n locations  
 <223> Clone ID: LIB148-007-Q1-E1-H1

<400> 4119

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caagcaccct caaggatgtc aagggtcgct tcagcaacgc cgaccacaag gacagcatca 180
gcaaagtgga acagccggcg gacagctcct tgaagccggc gaccctgaac gcgttcgaca 240
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aggccagcaa ctgcgggttc atgacccaga agccggcgtc ggcgatagtg tcaaagctgg 360
agcagatcgc tgagacagag cgcttcatgg tgaaaaaaca agacgggctg gtgaagctgc 420
aggg 424
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<210> 4120  
 <211> 443  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H12

<400> 4120

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ggtacaccac aaccacggca agttcacggc cgggccgtgg aaacccgccc acgcgacctt 180
ctacggcggg cgggacgggt ccggcaccac ggccggcgcg tgcgggtaca aggacacgcg 240
cgcgccgggg tatggcgctg agacggtggc cgtgagcacg gtgctgttcg gtgacggcgc 300
ggcctgcggc ggggtgctac aggtgcgctg cgtggacagc cctagcgggt gcaagcccag 360
cgcggcgaca ctggtggtga cggcgaccga cctgtgcccc cccaacgacc aacagtccgc 420
ggacagccgc gggtggtgca acc 443
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<210> 4121  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H3

<400> 4121

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catggcctcg attccggcga cgaccttcgc cgtcatctta tccgtcctct tctgtgccgc 180  
ggctggcacc gccgtcgaca acgacctccc cgactacgtc atccagggcc gcgtccattg 240  
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gaggctggag tgcaagcact tcggcaccgg caagctcgag cgctccatcg acgggggtgac 360  
cgacgggaac ggcacgtaca cgatcgagct caaggacagc cacgatgacg acatctgcga 420  
cgtggt 426

<210> 4122

<211> 400

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H5

<400> 4122

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gacgatcagt aatagcacat cgacgacgac gatcgatatg taatagcacg tcgtcgacga 180  
ccgaccgcag tcgtcgacga ctggctggca ctaaaccaca aatcctcttc acctggatta 240  
caaatatgta actgagaaag gaaaggaaaa caaaatgta actgcgtggc tgtacaaaaa 300  
aaaaaaaaaa aaaaaaaaaa aagaaaaaaa aaaaacagga acaataaaaa agaaaaaaaa 360  
aactacaggg agaaaaaata aaaaaaaaaa ggggcggccg 400

<210> 4123

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H6

<400> 4123

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 cctcataccc aagggcgact tccttgtcgg acaactcaac ttcacaggcc cttgcaaggg 180  
 cgacgtgacc atccaggtgg atggcaatct gctggcgacc acggaccta gccagtacaa 240  
 ggaacatggg aattggatcg agattctacg cgtggataac ctgggtcatca ccggcaaggg 300  
 aaaccttgac gggcagggcc cagccgtgtg gagcaagaac tctgcacca agaagtacga 360  
 ctgcaagatc cttcccaact cgctggtgat ggacttcgtg aacaacgggg acgtgtccgg 420  
 gatcacgctg ctcaact 437

<210> 4124

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H7

<400> 4124

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 gctgggcttc ctgctcgtcg cgctggtctg gaagtccgac ttcgcgccct tcatggtgct 180  
 catcattgcc atcctcaacg acggcaccat catgaccatc tccaaggacc gcgtgaagcc 240  
 gtcgccgacg cccgactcgt ggaagctcaa ggagatcttc gccacgggca tcgtgctagg 300  
 gacctacatg gcgctcgcca cggcgctctt cttctacctg gcgcacgaca ccgacttctt 360  
 caccaacgcc ttcggcgtgc ggtccatcaa ggagaacgac aaggagctga tggcggcgct 420  
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<210> 4125

<211> 94

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A1

<400> 4125

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cgggccgaca cagacggtgg tcaccggcga caag

94

<210> 4126

<211> 447

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A11

<400> 4126

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cgccgcaacc gccacatcag ccatgggagc ctgcgcaacc aagcccaaga cgcttgaggg 120  
gcaggcccca gctgaggccg ccgtctccac acccaaggtt gcgcccagg ccactccaat 180  
ctccgttgag gttgaggctg atgaacaggt agctgagaag gtggtggtgg aggagccggc 240  
tgccggcgcc gacgttgagc atcagaaggc taatgaggtg ctgctccag aggcggccgt 300  
cgccgagccc gaccacaagg aggaggaagc cgtggagaag accgtcgtcg aggaggagaa 360  
gccagcggca gcagcccatg cagaggaaaa ggtcgccacc gccgccgaga ccacgacgac 420  
ggtggaggcg aagaagaacg ccgagga 447

<210> 4127

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A6

<400> 4127

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tgccgcgtcc tcgtcgccgc ctcgccacc gtggcgctgg ccgaggagg gccggctccg 180  
tccccacca gcggctctc cgcggtcgca cccgccatcg tcggggccgc cgtggcctcc 240  
ttcttcgcgt actacattca ctgagccgcc ggacgaggag ccggactgcc ggagggaaga 300  
gaccaagggg gggagagact tggctgcgt gcgctgctct gctgctccc cgcattccc 360  
atgcgtgggt ggggtgtgctc tgattgggca cggcagtggc acaccttcgt ctctcttttg 420  
tttgtttttt tc 432

<210> 4128  
 <211> 440  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A7

<400> 4128

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tcgagaaggg ctgcaacccc aactacctgg ccgtgctggt gaagtatgtg ggggacgacg 120
gcgacatcgt gctgatggaa atccaggaca agttgtcggc tgagtgggaag cccatgaagc 180
tctcttgggg cgccatctgg aggatggaca ctgccaaggc gctcaagggc cccttctcca 240
tccgcctcac cagcgagtcg ggcaagaagg tcatcgccaa agacgtcatc ccgccgaact 300
ggagacccga tgccgtctac acttccaacg tccaattcta ctagactttg aattcccttc 360
gattcatccg gcgcggtggg ctatggacct gcagcagcaa gctaattaag tttatatata 420
ttgcatgaga gagcatgcac 440
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<210> 4129  
 <211> 433  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A8

<400> 4129

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taccaagatc cctactgctc aaagaatgtg cacagaacat ggtgtaaaac taaaagcaaa 180
caaaccaaca ttttttggct tacttatctc atctcaacct ggatctccat ctctctgtct 240
cccgaggctt tacaagctgt acaggcgcag ccgggatccg gagccaccac tcccgcaatc 300
tcctcaccag ctctctactg ctcttcttcc tcaccggcat ctgtcttggt tattcttcta 360
gaaggattag tagaacgatg gtcctcaagg gcacgaacgt gaatatcgca gccacagcaa 420
ccagtgcagc tgc 433
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<210> 4130

<211> 444  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-008-Q1-E1-A9  
  
 <400> 4130  
  
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 cgagagaaac gagagcggca gacaccatgg ggagctcgag gaccatcggt gcgtccccc 180  
 tgctcctcct cgccctcctc ctcttggtt tcgcggccac cgccgaggcc cgcgttggtc 240  
 ccgagctggt tggcgaggac caattccagc ggacatgcaa ccaggtgcac ttcaggaaga 300  
 tgtgccagag cttgacgagg ctcccgagg tgacaacgcc gcgcgaactg ctgctagcgt 360  
 cgatgcgcgt cgccggcgat aaggccagg aggccaagag ccgggtggac gagttcgcgg 420  
 cgaggaacca cgagggccgg ccga 444

<210> 4131  
 <211> 162  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-008-Q1-E1-B1  
  
 <400> 4131  
  
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 acatcatggt cgtgggcgcc gtccttgccg cgcttgctgt cggcgggtcc tgcgggcccc 120  
 ccaatgtgcc gcccgcccc aacatcacca cgaactataa cg 162

<210> 4132  
 <211> 453  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-008-Q1-E1-B10  
  
 <400> 4132  
  
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tcgtgcgggc ccccggaaggt gccacccggc cccaacatca ccaccaacta caacggcaag 180  
 tggctcaccg ctagggccac ctggtacggt cagcccaacg gtgccggcgc tcctgacaac 240  
 ggcggtgcgt gcgggatcaa gaacgtgaac ctgccaccct acagcggcat gacggcgtgc 300  
 ggcaacgtcc ccattttcaa ggacggcaag ggctgcggct catgctacga ggtgagatgc 360  
 aaggaaaaac ctgagtgtc gggcaatcca ttacgggtgt acatcactga catgaactac 420  
 gagcctatcg ctccctacca cttcgacttg agc 453

<210> 4133  
 <211> 432  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-008-Q1-E1-B12

<400> 4133

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 ctgcggggcg aggaggagga ggacaaggag gagatggtga agctgatcag ggtcggcatg 180  
 gcgtgctcg agagcaacgt ggacaaccgg tgggagctca agaccgccat cgagaggatc 240  
 gaggagctca aggcgaagga gcgccccgac gaggagcaag cgacggtgat cgacaggagc 300  
 tacagcgatg ttgccctcaa ctgatcatcg acacgaaccg gccgggaatc gatcgatang 360  
 gaaggttgtg cgcaagctga tgatatgagc ccaaaatgtg atgacctgca tgcagccga 420  
 gaccctaaac at 432

<210> 4134  
 <211> 326  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-008-Q1-E1-B2

<400> 4134

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aagcccaaga cgcttgaggg gcangcccca gctgaggccg cegtctccac acccaaaggt 180  
 tgcgcccagag gccactccaa tctccgttga gggtgcccgt gatgaacagg tagctganaa 240  
 ggtggtggtg gaggagccgg ctgcggcggc cgacgttgaa catcagaagg ctaatgaggt 300  
 ggtcgctcca gagggcgccg tcgccg 326

<210> 4135  
 <211> 86  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
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 <400> 4135

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 ggacgctgag ggcgggcgaa ggctcc 86

<210> 4136  
 <211> 269  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-008-Q1-E1-B5  
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 cgaattacgt gccttcttcg tcacaggctc cgctcttatt tgtagattga agcttacatg 120  
 aacatttgac tagatcatcg aaggattggt aggcctcttt aaagttgggg tcgtgaaggg 180  
 caataaactt gcctagcggg attcaagatg gagcgattcg tagttcgtcc taggacttgg 240  
 ggagaagaag tttaacaaga acgtgaaga 269

<210> 4137  
 <211> 258  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-008-Q1-E1-B6  
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aagggagacg tttggaaagc aaaaaagaaa gaaaatacgg tgctgtttgg ctggcttgtc 120  
tcaaaaattgc caggttatgc tttcatcata gtgtctgccg ttgaaatgtt gtagtagtaa 180  
aatcgtaggg tgtaaaatgt tttcttgtaa agtcattgtg tataccaacc aaattcaaga 240  
aagcttaca gttggccc 258

<210> 4138  
<211> 396  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-008-Q1-E1-B7

<400> 4138

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ggtgccgctc cgctctcgtc cccccgggtc cgcncgggcc tgcttgccgg aaccagggtg 120  
gcagggcact cgggcaacca cttggttggg aaggcaacga caccacccta tgctctgtcc 180  
tcgcccgcag attaagattg caccaccagt gaatttggaa ccttgaagca ttcattctgag 240  
acatggaaaa agtgatctgc tgggcatatc tccttcaacg caagcagttc tcgaaagaaa 300  
ctcttgattg ctgtgtctta gtcgtggga acactcctct ctctctctc gtgaactaca 360  
catagtgggtt atatgttctt ctatgctcaa caacaa 396

<210> 4139  
<211> 433  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-B8

<400> 4139

ccacgcgtcc acccacgct ccgcctggct gtacctggcg acgaggcggc aggtgtacgc 60  
ggacttcatt gccacgagg ccatctcgtc gagcgtggcc gagttcagct gggacctcaa 120  
gttcccgggc gcgcaggtgc tgctggccga gttcaacatg acctcggcgg gcggcgcgca 180  
gaacttcaag tcgcaggcgg acaacttcgt gtgcgcggtg ctgccggaca cggcgttcca 240  
ccaggtgttc atcaccccg gcggcgtgat ccacctccgc gacggcgcca actcgcagta 300

cgtgaccagc acggcggttcc tgctggtggt gtacgaggac ctgctgctgc ggacggggca 360  
gacggtgctg tgcgggaacc agccgctgcc cccggcccgg ttgcacgagt tcgcgcggca 420  
gcagatggac tac 433

<210> 4140  
<211> 378  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
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<400> 4140

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aaaaaaaaa aagaaaaaaaa aaaaaaaaaa aaaaaaaca aaaaaaaga agacacgtca 120  
aacgtgggga ggattcacat ggggcttcaa gttcccgtgc gcgcaagtgc tgctggacga 180  
gttcaccatg acgtcagctg gctgcactta caaggctcgc tcttaagcgg gcaacttctg 240  
gtacaccgtg gtggtggcca aagttttcca ccatgtgtta aacaccctt gcggcatgag 300  
tcatcttcgc aacggggcca actcgcatta cctttccaac attttgttcc tgctggtggt 360  
gtacggggac ctgctgct 378

<210> 4141  
<211> 392  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-008-Q1-E1-C1

<400> 4141

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agggcatcga tgcgaaagcg tccgggcctg gtgggtcctt cgacatcacc aagttgggcg 180  
cctccggcaa tggcaagaca gacagcacga aggctgtgca ngaggcatgg gcatcggcgt 240  
gcggcggcac tgggaagcag acaatcctca tacccaaggg cgacttcctt gtcggacaac 300  
tcaacttcac aggcccttgc aaggcgacg tgacaatcca ggtggatggc aatctgctgg 360

caaccacgga cctaagccag tacaaggacc at

392

<210> 4142

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-C10

<400> 4142

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gacgtcgtgc gcaaggaggc cgagaactgc gactgcctcc aagggttcca agtatgccac 120

tccctgggtg gcggcactgg ttctggcatg ggcacgctgc tcatttccaa gatccgggag 180

gagtaccggg accgcatgat gtcacacctt tccgtgttcc cgtcgcccaa ggtgtccgac 240

accgtcgtgg agccctacaa cgccacgctg tccgtgcacc agctcgtgga gaacgccgac 300

gagtgcattg tccttgacaa ctatgcgctc tatgatattt gcttccgcac cctcaagctc 360

accaaccctt catttggtga cctgaaccat ctgatctcgg cgaccatgag cggcgtgaca 420

tgctgcctgc gggt 434

<210> 4143

<211> 313

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-C2

<400> 4143

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cagtttactc acccctctta gtcgattggt atttaagtgc agtctcttcg gagatgcaat 120

tacagtccat cctctctttc ttttcccctt tctcaaagag ctaggacctt gctcgactga 180

gcatcaggct gtacggctct ttgtgatcat cttttgccag ttttcttctt gtagcacaag 240

ttgttgggca tggaactcct gttcctttca ccaatagaag cataatgatc agcactgtga 300

aacaagaacc gaa 313

<210> 4144

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-C5

<400> 4144

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tccacatcct tttctctcct cctcgccggc ccaacctgat tgttcttcaa ccaagaggaa 120  
gaaaggaagg aagggaccgg aagcatcagc catgtcgaac tcggcgtcgg gaatggccgt 180  
ctgtgatgaa tgcaagctca agttccagga gctcaaggca aagaggagct tccgcttcat 240  
cgtgttcaag atcaacgaga acgtgcacca ggtggtggtg gacaggctag gggagccagg 300  
cgagagctac gacgccttca cggcctgctt ccccgccaac gagtgccgct acgccgtgtt 360  
caattttgac ttctgtactg acgagatctg ccagaagagc aatatcttct ttacctcttg 420  
ggccccggat acatc 435

<210> 4145

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-C6

<400> 4145

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ttctgcaaga tgcagggcat ctgttgagc tggggcgggc ccatctgggc gttcagcgtc 180  
gtcacctact tcccgtgga cgtgctcaag ttcgccatcc gctacgcgt ctccggaaag 240  
gcctgtcaca acatcaaaa caacacggac ttcaccaacc gcaccgacta cagcaacggc 300  
gaacgatagg cgcagtgggc catggcacag atgacgctgc atggggtcaa ccaggccacc 360  
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<210> 4146

<211> 442

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-008-Q1-E1-C7

<400> 4146

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gctggtactg ctccgtctcc gcctgctgct tctggttggg gttgcgagcagg cggtagtgga 180

gttgggtgct gctgatgata atatcgccgc cgccgctgct ggcacggcgg tggacgatgg 240

cgagccgcct cagcagtgcg cgaccccggt gagcgtggag gaggcgtgcc gggcgcgctc 300

cgagacgcac gccggcgtagg cctaacgaca ctgcatggcg tcgctgggag cgcacccgcg 360

cagcaaggag gccggcaaca ngaacatgca cgggctggcg gtgctggcca caggatggcc 420

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<210> 4147

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-C8

<400> 4147

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cggctctccgc ctgctgcttc tgggttggtg tgccgacgag gtagtgagct tggtagctgc 180

tgataataat atcaccgccc ccgctgctgg cacggcggtg gacgatagcg agccgcctca 240

ctactgcacg accccggtga gcgtggagga cgctgcccgc ggcgcgtccg agacgcactc 300

cggcgtgggc tacgaccact gcatggcgctc actggacgcc taccgctca gcaaggaggc 360

cgagacacga acatgcacag gctggcggtg ctggccacca cgatggccat ccatcacgcc 420

gccagcaacg 430

<210> 4148

<211> 452

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-C9

<400> 4148

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 gagtctggcg tgccgtcatc gatgatctac ttactgtgag gggaatgagc aaggcgcaaa 180  
 atgctcttct ttctggatgc tcagccggag gtctagcagc aatactacac tgtgacagat 240  
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 tcgatgggaa ggatatctcc gggaactttt acgctaggtc aatctataag agcgttgatga 360  
 atctacatgg atcagccaaa aatttaccag cttcatgtac ctcaaagcca aagcaatcac 420  
 ctgagctgtg tatgttccac agtatgttgt cc 452

<210> 4149  
 <211> 465  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-008-Q1-E1-D1  
 <400> 4149

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 atgcgaagcc gaagaagcac acggcgaagg agatcgccgc gaagatcgac gcggcgacga 180  
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 atgcgaagct ggcgtgcccg ctctgccgca ccccgccgcc cgacatcaag tccatgcaga 300  
 tccaccacga ggcgcgccac cccaagctcc ccttcgagcc ggagaagctc ctcaacctgc 360  
 actcctccgc ccccgctgct gccgccgccg ccggcgggcg cgcccgccgc cgccgacgcc 420  
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<210> 4150  
 <211> 455  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-008-Q1-E1-D11  
 <400> 4150

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aagcttgcca tggcggccgt cccgtccgac aggggccacc accaccaccg ccgctccgag 120  
gcgtcgtgtc cggcaacctc cgcggccgtg gcggcggcga gggccgatga cgccttgccg 180  
cagcgcgccg gggggctcgt gcaggtccgg gagcgggacc agggcccgct gtcgacgggg 240  
caccagcacc tgcaccacca tcaccaccag ctgcggcggt cggcggcggt cccaccccg 300  
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caccgtcctt gcagcgaggt ggccggcggc accgcggcgg gctgcgcgcg tgtgtgctgc 420  
tgcttccctt gcgtcatggt ggaggtcgcg gtgct 455

<210> 4151  
<211> 421  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D12

<400> 4151

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ccccttcctc cccgtcccca cccacatgcc ctgcctcgc cccgccccgc cctgcccagg 180  
ctgagttccc ccacccccca acaaacaatt actagagtag ctgcattggc ggggaaatta 240  
aagcgctaga agctcagcag caatggcgga gcatgcgggc gccggaaggt actggtgcca 300  
catgtgcgcc gcggccgtta gccccgcga gggcgaggtg gagatgaagt gcccgttctg 360  
ccacagcggc ttcctcgagg agatggagac cgcccgcggg gccgcgaccg acgacggtga 420  
c 421

<210> 4152  
<211> 165  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D2

<400> 4152

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gtcattgtga ggacctccca atctcccacc aggcataaac atcac 165

<210> 4153  
<211> 436  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D5

<400> 4153

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tggcatcatc cggcgcgccc cttgggggtac ctttcccca attgggggca acggcccaaa 180  
aggtaccgta ggcaaagaga agaaaaccgg cggcaaccgc taaggcggcg aaggcaaaaa 240  
tattcaggac gacttctgct cgacgctgtt caaaggcatg aaggggacgg acctggtcct 300  
gtgcaaagag tcctgcgcgc tctcccagca ctccaacctg gtgctgtacg gcaggattca 360  
gtgcaagggc aagtgcaccg agcagaaggc catcacggcg cgggccatga aggtctgcca 420  
ggaggattgc gacaag 436

<210> 4154  
<211> 437  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D6

<400> 4154

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tgcacgccga ggaatcgctg cccgttgttg ccaaaagcgg cgcggcggtg gcgaggaacg 180  
acggcgactc gcggctgctc gtcgacctgg agcccgtgcc ggcgatcaga ttcagcaagc 240  
ggcacggcga cgacggcgcc ggcgaccacg cgccgccgta cgccaagacc ttgtccagca 300  
gcttcaagga gccggcccgt gtcgcggacc gccgccctct ctccggcccc gggcagctcg 360  
ccgcgtccac cggtttcgcc tgggccaaga agccccggtc cgtcgccagg tcttcgacgg 420  
cggcagccgc cgtcaca 437



<210> 4155  
 <211> 451  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D7

<400> 4155

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tgccccatcg ccgtcgtcta ggaagtctgg tccagctacc gcgccagcca ccgcctctac  180
accccccttct tccacggacg aggagttgag cccttccccg ccagcatcca ccgccgcggc  240
gtccccctgcg gctgaggggac cggctgctga tgactccgcc ggtgctgctg cccttggaag  300
tggagctgcc atcgccggcg ttgccgtgc tgttctacc atgatcttct tctactaaac  360
tcaccgacga tggctcgtgtc gcggtgagac attaggggtg acacgtaatt ggctgtgctg  420
taatcgctct cgtctggtgg ggaaggaagg a                                     451

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<210> 4156  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-H3

<400> 4156

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cgctcctctt cacatggcac gggatccagc agaggaagaa ctctgtggcag gacggcatgc  180
cgggcaccat gtgcccgatc cagcccaaca ccaacttcac gtaccactgg cagcccaagg  240
accagatcgg cagcttcttc tactaccca gcaccggcat gcagcgggcg gcggggcct  300
acgggctgat cagcgtccac agccgtgacc tgatcccggt gcccttcgac acgccggccg  360
acgacttccc ggtgctcatc ggcgactggt acaccaagga ccacgccgtg ctggccaaga  420
acctggacgc cg                                     432

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<210> 4157  
<211> 433  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-H5

<400> 4157

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ccgagccacc ggccgggtgg gcttggcca tcaaccaggc caggctcgtc cgctggaacc 180  
tgacggccag cgccgcgcgg cccaacccgc agggctccta ccactacggc cagatcaaca 240  
tcaccgcac catcaaggct atggtctccc gcggccacat cgacggcaag ctccgctacg 300  
gcttcaacgg catctccac agggaccccg agaccccggt gaagctcgt gaatacttca 360  
acgtcaccca cgggggtgtt agctacaacc agatgggcga cgtgcccccc gccgtgaacg 420  
ggtcctcca tgt 433

<210> 4158  
<211> 453  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-H6

<400> 4158

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atgcgcctgt cgtccctcct cctcgtcgtg gccgccctct cggcgcgcgc cgcggcgcag 180  
caggtgccgc cgggtgggcgg cagcgtctg aagccggact actacagcca gtcgtgcccc 240  
cgcgcgagc ggatcatcgc ggaggtgatg cagacgaagc agatggcgaa cccgacgacg 300  
gccgcgggca tgctgcgcgt cttctccac gactgcttcg tcaccgggtg cgacgcgtcg 360  
gtgctgatcg cgtccacca gttccagaag tcggaacacg acgcggagat caaccactcg 420  
ctcccgggga cgccttcgac gccgtggtgc gcg 453

<210> 4159  
<211> 432

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-001-Q1-E1-H7  
  
 <400> 4159  
  
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 ggtggcgggtg gggatctgcg tgatgcagct ggtgcgcaac atcaccacca acccggaggt 180  
 gcgggtgacc aaggagaagc gggcggccgg ggtgctggac aaccacgacg aggggcggcg 240  
 ctactcgcag cagggcgtgc gcaggttctg gctctccaag cgccgcgact acatgcaggc 300  
 catggacaag gtgcccacgg accctaataa gtagacgacg acgatatacc ccaatgcatg 360  
 gcaagaagat atatatatca gcacaacgca actgcatgcg atgctgcttg ttgctgcaat 420  
 taatccacta ta 432

<210> 4160  
 <211> 374  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-001-Q1-E1-H8  
  
 <400> 4160  
  
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 acgtgcgcgc cgtcacgtac ctcgactccg acgtggtcgt ggtggacgac gtccggacgc 180  
 tggcgctccgt ggacctcgcg ggccacgtgg tggcggcgcg cgagtactgc cagcccaact 240  
 tcagcaacta cttcacggac gccttctggt cgcacccggc gctcaacggc accttccacg 300  
 ggcgcgcgcc atgctacttc aacacgggcg tcatggtcat ggacgtcgac aagtggcgcg 360  
 ccggcgggta cagc 374

<210> 4161  
 <211> 210  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-001-Q1-E1-H9

<400> 4161

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tcattttcta cacaattgat atagtagatt aacatcaaac tctacgtaga tgtgaagata 120

aataatgtgg taaaagtttg atgttaatct actatatcaa ttgtgtagaa aatgattata 180

tagaaacgaa tagaaaagat taagcttcaa 210

<210> 4162

<211> 326

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-A1

<400> 4162

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aacgccctcc gctgcggcaa ggtcgtgggg ctgccgctgc cgccgtccta cgcccccgcg 120

cgctaagacg acgaaggcct cgttttctcc tcgtggtctg accatccaat ccaaactcaa 180

aagaacaaat acgaaagaag cgtagtgaag gggaacaaat gaatggatat atgtaatctt 240

gagatgcatg ccctctcaaa tcaactgtact ggggttctca aaaaaatcat tgtaatggga 300

gttatatata taactttatc tcacca 326

<210> 4163

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-A10

<400> 4163

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ccacagggac accgagaccc ccctcaagct cgccgagtac ttcaacgtca ccgacggggg 120

gttcagctac aaccagatgg gcgacgtgcc ccccgccgtt aacggggccac tccatgtcat 180

ccccaacgtc atcaccgccg agttccggac cttcatcgag atcgtcttcg agaacccccga 240

gaagagcata gactccctcc acctcgacgg ctacgccttc ttccggcgtcg ggatggggcc 300

tgggacgtgg tcgccggaga tgaggaagac gtacaaccta ctggacacgg tgagccggca 360

cacgatccag gtgtaccgc ggtcatggac ggcatcatg ctgacattcg acaacgcggg 420  
ca 422

<210> 4164  
<211> 423  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-002-Q1-E1-A12

<400> 4164

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tctttgctgg aaagcagctt gaggacgggc gcacgcttgc cgactacaac atccagaagg 180  
agagcaccct ccacttggtg ctgcgcctca ggggagggcat gcagatcttc gtgaagacct 240  
tgaccggcaa gactatcacc ctgcaggtgg agtcttcaga caccatcgac aatgtcaagg 300  
ccaagatcca ggacaatgag ggcacncac cggaccagca gcgtttgatc ttcgctggca 360  
agcagctgga ggatggccgc acccttgccg attacaacat ccagaaggag agcaccctcc 420  
acc 423

<210> 4165  
<211> 452  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-A2

<400> 4165

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ccacgctaag aaggctctga ggttgatcct accattgtga cacatgatgc aaaggatttg 180  
tacaaagctg gtgagaaaag gctgggtacg gatgagaaga cttttatccg cgttttact 240  
gaacgcagtt gggcacactt ggcacatgtt tctgtgcct accatcatat gtatgaccgg 300  
aaattagaga aggttatcaa gagcgaaaca tctggaaact ttgaattcgc acttttagct 360

atcctcagat gcgcggaaaa ccagcagag tatTTTgcaa agctcttacg aaaggccatg 420  
aaaggtctag gcactgatga caagacactt at 452

<210> 4166  
<211> 418  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-A3

<400> 4166

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atccgcgggc actgccggca cagtggacca ccgcgaagaa gtacaaggcc acgatggacg 180  
ccaagacgcg gcaggctttc gacggcgtgg tggccgcgcg tacggcagag aagcgggtccc 240  
aggcgggtgga ggccgtgctg cagcagcagc tgaacatgga cgtgtccctg tccaaggcga 300  
cgtcttccgg ggacgagaac aactacgtga gcgtggcgcg cgcttacgag aaggccgcgg 360  
gcgccgtcat cgccggcgacg ccggacaaca agctccgcgc tatggcggtc gcgttcga 418

<210> 4167  
<211> 439  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-A4

<400> 4167

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agaggggaag tcagaggcac ggagtggcgc agagcagacg cacgtgaacc attgtagctg 180  
tccctgtcgt cgtcgtcgtc gtcaacgaat ccacacaagg aaaggatgga gaagaagccg 240  
accatcctca tgaacaggta cgagctcggg cgcacgctcg ggcagggcac cttcgccaag 300  
gtgtaccacg gccggaacct cgcgtccggc gagagcgtgg ccatcaaggt catcgacaag 360  
gagaaggtga tgcgcgtcgg catgatcgac cagatcaagc gcgagatctc cgtcatgcgc 420  
ctcgttcgcg acccaacgt 439

<210> 4168  
 <211> 413  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-002-Q1-E1-A5  
  
 <400> 4168  
  
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 cagagcgccg ggggtgttga cgccatggcg gtgttgcgga tgcaggtgga cgcgttcaac 300  
 aagcgcaccg aggcggcgag ggcgcacgtc aaggaggccg ccgtgacggc gtcccccaag 360  
 gcgccgacgg tgctggacct gtgcaacaac ctgtacctgg acgtggagga caa 413

<210> 4169  
 <211> 367  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-002-Q1-E1-A6  
  
 <400> 4169  
  
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 ggcgctcgcc gcggaggctc cggctccggc ccccaccagc ggctcctccg ccgtcgcgcc 240  
 cgccgtcggc gccgcctcg gggcctccgt cgctcattc ttgcctacg acattcagtg 300  
 agccggggccg ggcgctccga ggccgaagaa taaaccaagg ggatagacag tgacatggct 360  
 gcgcgca 367

<210> 4170  
 <211> 407  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-A7

<400> 4170

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cggcggcggc gcggcggggc ccgggatgca cgtgtaccac gtgtcgtcgt cgacggtgaa 180  
ccctctggtg ttggcgacc tgagccggtt cctgttccag cacttcacgc ggtgcccta 240  
cagcgacgcg gcagggcagc ccatcctggt gccgccatg cgctcttcg acaccatgga 300  
gcagttcgcc agctacgtgg agacggacgc gctgctgcgc agcgcccggg cgacctcgtc 360  
ctcgctcgtc ctggcgacgc gggcgcgca cctgtgcgcc aggtccg 407

<210> 4171

<211> 453

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-A8

<400> 4171

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gaggcctgag cccctcgccg cggtagacca agccggcgca cgtcgccccg gggctcacgc 180  
tcaccaccga gcccaccca attaataata tatatatata gctaggatcg atcgtcagta 240  
aatggcagg ctccgccgtc ctgaggagcc cctgttccgt cctcctctac atcctcgccg 300  
ccgtgccccg caccgccgcg gcgacccga ccgacgccgc catcgacgag gcgtacgcgc 360  
atctcgtaa cctcaccgt aaccaggagt actgggcgga gcgcgcggag gcggcgacgc 420  
cgtacaaccg cgcggcgtta cagaccgacc ccg 453

<210> 4172

<211> 364

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-B12

<400> 4172



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 caacctgtgc cccatccatg ctaagcgtgt caccatcatg cccaaggaca ttcacctggc 180  
 aatgaggatc cgccgcgaga gggcctaatac gacacctcga acatcgtgac aaaaaaatga 240  
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 gtggatctca ggtcaaaacg gcggtccacc agtccaggtc gattcgggaa ggcactctca 360  
 agga 364

<210> 4173  
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 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-B3

<400> 4173

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 ccagatgctg tcgaagctgc ggcaccggca cctggtgtcg ctgatcggct actgcgacga 180  
 gaaccaggag atgatcctgg tgtacgagta catgcacaac ggcgtgttcc gggaccacat 240  
 ctacggcagc gaggggaagg cgccgtgcc gtggaagcag cggctggaga tctgcatcgg 300  
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 cgtgaagacc accaacatcc tgctggacga caacttcgtg g 401

<210> 4174  
 <211> 417  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-B6

<400> 4174

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 gacgagtgc agetcaagtt ccaggagctc aagtcgaagc gaagcttccg gttcatcacg 180

ttcaagatca acgagcagac gcagcaggtg gtggtggaca ggctggggca gccgggcgac 240  
acctacgacg acttcaccgg ctccatgccc gagagcgagt gccgctacgc cgtcttcgac 300  
ttcgacttca ccaccgacga gaactgccag aagagcaaga tcttgttcat ctcttggtcc 360  
ccggacacct cgaggggtcag gagcaagatg ctgtacgcga gctccaagga ccggttc 417

<210> 4175

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-B7

<400> 4175

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accaccaacg gcgtgcgcat caagtcgtac gtggacgccg agtcctgtgt gacggcctcc 180  
catctcacct tcgagaacat caggatggag gaggtggcca accccatcgt catcgaccag 240  
tactttctgcc cgcagaaggt atgccttggc aagcggagca actcctcgca tgtctccgtc 300  
aaggacgtca cgttcgcgaa catcaccggc acgtcgtcca cgcccaggc catcagcctg 360  
ctctgctcgg agacgcagcc atgcagcggc gtctccctca tcgatgtcaa cg 412

<210> 4176

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-B8

<400> 4176

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cctccacatg ttgttgtgag ctccaccact ccagtggtga agtcctctcc accacctgca 180  
ccggttagct cgccaccatt gacgcctaag ccggcaagcc cacctgcgca cgtgagctca 240  
ccacctgaag tggatgaagc atccacacca ccgacaccaa caacagtcac ctccacctca 300  
tcagagccca agtcacaccc gccacctact cctgtgagct tgccagctcc aatagttaag 360

tcctctccag cagcgtgcat tggttagctc agcaccgatg acgcctaagt cgtcacctcc 420  
accggttggt gtgagctcac 440

<210> 4177  
<211> 344  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-C1

<400> 4177

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ttcttttctt tttctctacg acttcgttat tccctccttt catctatctc tccgtgaact 180  
cggtttgctg tccagctggc tgtaagtgtg ccagatgcct tcgttacgtc tgatgaggct 240  
catgacaatg gcgattttgg catggagttg tgttagcctc gcggaaaaac tgtaactgtg 300  
taagcagaac tgctatatat tgttcctaac aatgttgctc ttaa 344

<210> 4178  
<211> 415  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-C11

<400> 4178

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cccattctcc ttatctccac cgcgcccgcc gtgcggggcca tcaccgacgc cgccggcggc 180  
cccggatacc tccaggaggc gtgcaacaag acgctgttcc ccaagggtgtg catgcacgcg 240  
ctcaaggaca acccagagtg ccaggcggag acggcgggtca cgccgcgcgc gctggccgag 300  
ctgctcgtgt acgtgtcggc cgagggtgggc atgaccgtgg ccgcgttcgc gcatcacgag 360  
ctcaacgcca tcaaggacga cgacgtcctg tacaagtgca tcgacacctg ctccg 415

<210> 4179  
<211> 419  
<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-002-Q1-E1-C12

<400> 4179

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tccgaaagct tttaatgcct cttgttagtg cgtaacgcta tgatggacca cacgtgaaca 120  
catctttggc tcattctgaa gccaaaatac ttcattgagaa gatccataag aaggcttaca 180  
gtgatgagga gatcattaca attctcacca cacggagcaa agctcagcta cttgcaacat 240  
tcaatagcta caaggatcag ttcactcatg caatcaacaa ggatctgaaa gctgacccca 300  
aggatgagtt tctttcaaca ctgcggggcga tcatccggtg cttcacctgc cctgacagat 360  
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<210> 4180

<211> 439

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-002-Q1-E1-C3

<400> 4180

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tttccccgat gtgtgggaat accaaggcac tgtatgaact agcaagctca acaacaagga 180  
tttcaaaata atcgaaaaga gagatggggg taggaagaac gggggctatg tagctagaaa 240  
caaaacgtgt tgtggtttga gaggaaccca cgaaacggca ctagtttgag acagtgttcg 300  
agaaatagca attgttttca aacaattcaa agaacaacag tagttttatc aaatgaattt 360  
agaaaacaac actccatata tatttttctg ccttttattt caggcctcac angcanatag 420  
accagattgc ccctatctt 439

<210> 4181

<211> 456

<212> DNA

<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-002-Q1-E1-C4

<400> 4181

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gctgctggac gcttccttcc ggcgcgctt cgcgcggcg ggctctgctg aggctccgt 180  
cccgtctggac ggcgggcgga ccacggtgca ctgctggcg tccccgccga gcgccgacga 240  
cggcgggcggc gaggacgccc gcccgtcct ggtgctcctg cacggctttg ggcccccggc 300  
gacgtggcag tggcgggcgc aggtgggccc gctctcgcg cggttcggc tcatcgctnc 360  
ggacctgctc ttcttcggcg gctcgccac gtcgtcgcg cccggcgtct ccgaggccca 420  
gcaagcggaa gcngtggcga aggtcgtggc ggctgt 456

<210> 4182  
<211> 382  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-C5

<400> 4182

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gatggctctg tcgtctcgcc gtatggcgc cgcaccattc ttcgtcgctg tccttctcgt 120  
cctcgtggcg gcagagagga cgatgggcag ggtgggtgtg gaagagacgc tctgcttgct 180  
gcagagccat gccttcaaag gcgtgtgcct cagcaacacc aactgcgaca acgtatgcaa 240  
gacggagaag ttcacaggcg gcgagtgcaa gatggacggc gtcatgcgca agtgcctactg 300  
caagaaggct tgctagggca tgaccggcag caagccccag ccgtacggct ggttgatccg 360  
gttgacacac gtttgggcac gc 382

<210> 4183  
<211> 415  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-C6

<400> 4183

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ttctcctcct cgtcgcagca gaggtgggaa ccatcgatgc caaaatggga gtagccatgc 180  
ccatgcatgc cttgataatg gagaaagcga aacagcagga gacggagaag aaggaggaga 240  
aaagcacgga gaaggaagag agtcaatgct tatcgccgag tctccagttc gagggcttct 300  
gcttcaacag cgacagatgc gccgaggtgt gcatgaatga gagctttccc ggtggcgagt 360  
gcaagcggga cgtggccatg cgcaagtgt tctgcaagaa gcttgctagt tcatac 415

<210> 4184

<211> 381

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-C7

<400> 4184

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acgtgcgac gactacctgt atggcgagtc cctatactta ctcatatacata agctgcgccg 120  
ccgtgtcgtc ggtgcggtgca ccgcgcagta gtgtgcttac agcggaaagct gcgactgcga 180  
gcgaggtagg gtgtgggggtg ggtgactggg taccaggagt ggggtacggt acgtagggtgc 240  
cacgttggag gctttggcgt ttgctcagag cctggcagga gatggggttg atgttctgct 300  
gctgtgttac tgtatcctac acctacagaa tgtgctatga tttgtactgc tataatTTTT 360  
aacgaagata caaacttcta c 381

<210> 4185

<211> 458

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-C8

<400> 4185

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gtggatggcg gtgccacaac ctctctgct gtcgctgctg gtcgcctgac tagcgggtggc 120  
cgccgatgtc gccaacgccg gccacgcaa gccctaacg cctggcgggc gcgtggtaca 180

cgacaaccac ggcaagttca cggccggggc gtggaaaccc gccacgcaa ctttctacgg 240  
 cgggcgtgac ggggtccggca ccacggcggg cgcgtgcggg tacaaggaca cgcgcacgca 300  
 ggggtacggc gtgcagacgg tggccgtgag cactgtgctg ttcggtgacg gcgcggcctg 360  
 cggaggggtgc tacgaagtgc ggtgcgtgga cagccctagc gggtgcaagc ccgacgcggc 420  
 agcgctggtg gtgacggtga ccgacctgtg cccgccc 458

<210> 4186  
 <211> 433  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-C9

<400> 4186

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 ccgggcctgg tgggtccttc gacatcacca agttgggcgc ctccggcaat ggcaagacag 180  
 acagcacgaa ggctgtgcag gaggcattgg catcagcgtg cggcggcact gggaatcaga 240  
 caatcctcat acccaagggc gacttccttg tcggacaact caacttcaca ggcccttgca 300  
 agggcgacgt gaccatccac gtggatggca atctgctggc gaccacggac ctaagccagt 360  
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 atggaaacct tga 433

<210> 4187  
 <211> 422  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-D10

<400> 4187

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 aagcaggag aaaaaatggc actggcccat tgaggaagct tgagaaccag ttaacaagaa 180  
 ttgccaacat attcttggac aatcttgta acagagtttt aaggtttccc agcagacatt 240

tttcgagtcc aggaagagcg cgtgcaacca ccacattcat ataattaata agcaaggttt 300  
agagaagagg caacatgggc acaaagatga agaaggggat cctgaagccg ttccgctata 360  
tctcaaccat catggatggt aaggaggctg aaatgcaaat tgggttcccg acggatgtaa 420  
aa 422

<210> 4188  
<211> 162  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-002-Q1-E1-D11  
<400> 4188

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tgtaattatt attagaccga cgctcaciaa tcttggaact tattcattat gctagtgtat 120  
atctgtaatc ccattccata atgttaatgt tgatttgtgg tc 162

<210> 4189  
<211> 419  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-002-Q1-E1-D12  
<400> 4189

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ctccctggca tggaggaagt agctgtttcg cctatgatcg ttgccgccgt agtgctggac 120  
aacaatggcg ctgacgcggt ctctgcact gccatcccta gcgtaacaat aagcctagag 180  
gagaaagaaa atatcaatgg ggatgttccc acgatcacct cggccgcaag caacgaggag 240  
gaggcgttgt tcagtgtcgg agaatccacc aaggacgatg gccatcgctt gacgatggaa 300  
tgctccactc ccgtctctc cagtagccct tccactcgca agaagcgcgg ggcgttcagc 360  
ctcttcaagg cgatgttctt gtccttcggc cgagcgacg acagcatgaa gaagacaga 419

<210> 4190  
<211> 421  
<212> DNA  
<213> Zea mays



<223> Clone ID: LIB148-002-Q1-E1-D2

<400> 4190

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acaactcgct ggggatggac ttcgtgaata atcgggatgt gtctcgggtc acgctgcgta 120  
actccaagtt cttccagatt aacatgtacc ggttcaagga tatgctgac aaggaagtaa 180  
ctgtgacagc gcccgcgat aacccaaca ctgatggcat ccacatgggc gattcatccg 240  
ggatcaccag cattaacaac gtcattgtcg tcagcgacga ctgtatctcc atcagaccog 300  
ggatctccaa cgtgaacatc accggcgtga cctgcaggcc tgaccattgt atcagcatcg 360  
gaagcctacg gaggtacaat gacgaggaac gacatcacgg acatcaacat caacgattgc 420  
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<210> 4191

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-D3

<400> 4191

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gcttgtgaag acaaggctca ggcactgggc tcaagtagtg gcttgttcag tgaagcactc 180  
gagctgatcc tcgtcagtgt ttatttcacg ctcttcttcc atacataata cccgtacaag 240  
tggttgcgat ggcgatgaat tagtcgtgtc cgagtgaaac tagatcaatt gaccttggtg 300  
ctcgatctaa tgcgtccca ggtcacattg ttgtggacag atttaattag cgtcggggtg 360  
gcaaattaaa aaatgtatat gcaaagtact gttaaagggtt ggcattggtgt 410

<210> 4192

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-D4

<400> 4192

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tgtttcaccg ccggcctccc cctccgacgc ggcaccggcc cccgcgcacc gggcccggat 120  
gctatgctgc tgagctgcag gaccctctcc acctgggtgc gccgcctcgt cgcttgcattg 180  
ggagcagagg ttgctttgga tgctgtgcta agccaactcc aataatagca gtagacgagc 240  
cttccaagcg gttgaggatc cagggggcgat cagtaaggaa ggctagcctc tcggaggact 300  
tttggagcac gagtgcgcat gagatggaga acagcgggat ccaatcgagc aggagcattg 360  
cttcgatcag cacgttgggt cagtccagcg atcagcatgc gtcaggaagt tgcagcaacc 420  
cgaat 425

<210> 4193  
<211> 293  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-002-Q1-E1-D5  
<400> 4193

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gccatgcca tgccccctca tctcgtcggt ccgccggcga gcatcgatcg atctttttct 120  
ttgcatgctg tcggtcgtcc ccatcattgt gcggatgtgt ttaaagcgcc gtggacttgc 180  
gtgtaacctg caactcgtct tttgttctgt ggtctgacgt ataactctgtg tcggcatccc 240  
attctgataa ctccaagacc gcaacgagag ggcgaccttg gcaattctga ccg 293

<210> 4194  
<211> 415  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-002-Q1-E1-D6  
<400> 4194

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acacaaataa aaacactcct caggatatta ttactagaga gcctcacttg tatgcattct 120  
cattcaagaa cgggagactg gaggttactg agatcttcaa cttttctcaa gatgatttgt 180  
taactgaaga catgatggta cttgacacac atggtgaagt tttcatttgg attggtcagt 240

atgtggaatc aaaagagaaa cagaaggcat ttgacattgg ccagaaatac gtggagcatg 300  
 caaattctat tgaagatctt tctccacatg taccactata taaagtcatg ggagggaatg 360  
 agccatgctt cttcaggacg tacttttctt gggataaacac agaatctttg gttca 415

<210> 4195

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-D7

<400> 4195

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 gacgggtacc cgctcaacgt gtcctctac tgetccctcc tccaggccat ctttgatctg 180  
 agggagagca ccgtcgtgct cgacgaggtt gacgagctcc tggagctcat caagaaagac 240  
 gtggccgacg ctccggcatca acaggatgct gcacagcgtg tgcttgctgt ggggtcttctt 300  
 ccagcagtac gtgatcacgg gccaggtcga gccggacctc gccgctgcgg cgctcgccat 360  
 actcgttgac gtggcagccg acaccaagca cgggagccgt gacccgatgt acg 413

<210> 4196

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-D8

<400> 4196

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 gtgtaccacg gccggaacct cgcgtccggc gagagcgtgg ccatcaaggt catcgacaag 180  
 gagaaggatga tgcgcgtcgg catgatcgac cagatcaagc gcgagatctc cgtcatgcgc 240  
 ctcgctccgc accccaacgt cgtgcagctg cagcaggtga tggccagcaa gagcaagata 300  
 tacttcgcca tggagtacgt ccggggcggc gagctcttcg cccgcgtcgc ccgcgccggg 360  
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cacagccgcg gcgtct

436

<210> 4197

<211> 326

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-D9

<400> 4197

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tgaccatcca gtctaactaa tccattcctg tgctgctcgg cgaaataaaa tcatcaaaaa 120

gaacaaagac gaaggaagcc tagggaaggg agaagggacg ttgggtgggg gtgagccaaa 180

tgagaacgca cggatatatc tattgatgta atcttgagat gccctctcaa atcactgtaa 240

tgggggttaa aaaacaatca ttgtaatggg agttatatat acttttatct taacatttat 300

ttacaccagc aagtcctggt gtatgc 326

<210> 4198

<211> 95

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-E1

<400> 4198

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cactaagagg atgggcagtg tgggctagtc aatct 95

<210> 4199

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-E10

<400> 4199

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gacgctgtgc gagggcaaga aggggacgga cctggctgtg tgcaaggagt cctgcgcgct 120

ctcccagcag tccaacctgg tgctgtacgg caggatccag tgcaagggca aatgcaccga 180

gcagaagggc atcacggcgc cggccatgaa ggtctgccag gaggagtgcg acaaggcgta 240  
cgtggtgaag gcggccgatg tcaccaaggc ctgcagcgtc acctgcgcca aggagaagaa 300  
cccgcgcctc agcgagaact gcaagagggtc ctgcacccct cctccttctt gaagcgaagc 360  
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ggcg 424

<210> 4200  
<211> 418  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-002-Q1-E1-E11  
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agtacatcga ttctcccccc aagatcaaag gccgggtggag gaagaaaggt tagggagtcg 180  
gccatgggat gcttttcatg ctgctgtgtg gcagatgacg acaacgttgg caggaggaag 240  
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ttcccagccc caaccctgt catctccact ggcagagctc agccaattgc agtaccggcc 360  
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<210> 4201  
<211> 420  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-002-Q1-E1-E12  
<400> 4201

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tggctatgcc tatcctgcct atgaatgcta caagaccgtt gaactgaaca aaccacagat 240  
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gagaattggc gatttttagac tatcatgggt accgtttttac tcagaatcaa atgtgttgat 360  
ctatgtagat ttgtggtacc ctaagacaaa gggaactacg tatgttttatg gcactttctt 420

<210> 4202  
<211> 463  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-E2

<400> 4202

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tgccgtttga ttctgtgca acaagaaggc tgacaaaaat aaaagggggg gggtcagtga 180  
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aataggatga agcgaataag acggacacgt atcagtggac actgcaagta aatccaccgc 300  
caaatttgcc atcctaggga agaaaaatga ttccctgggt aacttggtga acccgattta 360  
atgtgagaca agacaacaat accaggggtg agcttgccac ttggtcatga cacacacgag 420  
aatacgagat gaccaagtaa aaactggaca gaatgcactc aca 463

<210> 4203  
<211> 422  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-E3

<400> 4203

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tctccgatgg gagcgccgga cgagccagag gaggaggcca ccgaagtcga tccgggcagg 180  
aagtcgacct ccagctcgtc ctctcctcgt tcgtcatccg cgtcgtcggc tgatgacatc 240  
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cacggagcgg aggccaaaac ggtccgatcg gcgacgccga aggaggaacg agccggagcc 360  
gccacgtgc acggcgagcc ggcggactgc gcggtgacgg aggacgtaca acaggccggt 420

cc

422

<210> 4204  
 <211> 463  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-002-Q1-E1-E4  
 <400> 4204

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 tgagaaggaa gagtcaaagg gcatcgatgc gaaagcgccc gggcctgggt ggtccttcga 180  
 catcaccaag ttgggcgcct ccggcaatgg caagacagac agcacgaagg ctgtgcanga 240  
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 cttccttggt ggacaactca acttcacagg cccttgcaag ggcgacgtga ccatccaggt 360  
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<210> 4205  
 <211> 406  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-002-Q1-E1-E5  
 <400> 4205

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 ccagcgagca cgcgaggacc ctcggtccca aaggatccga ctgccacaag ggcggtctgt 300  
 attggtgaca ccattgggtg cccctgaag gacacctccg gcccgctcct caacatcctc 360  
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<210> 4206  
 <211> 447  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-002-Q1-E1-E6  
  
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 gccatgacgg ccatctccga cctggaaacg atccacgagg acgtcgtcac cagcgcgcac 180  
 cagaagcgag ccgcgctcat cgtgctcccc ttccacaagc tccaccagat cgacggccac 240  
 atggagtcgc ttggcgacca gtaccagcac atcaaccagc gcgtgctcca ccacgctccc 300  
 tgctccgtag gcatcctcgt cgaccgcggc ctccggcgtg tcgctcaggt ggccgccagc 360  
 gacgtgtcat acaccatcgt tgtcatcttc ttccgtggcc gcgacgaccg cgaggccctg 420  
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<210> 4207  
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 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-002-Q1-E1-E7  
  
 <400> 4207  
  
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 aaggcttatc gtgtgttggt cctccgttgc gactacgggg atattaggtt gtgtgtgtat 120  
 gtggaccgac accactgttg agctgtcgac ccattagggc tatggtcatt tgagtctata 180  
 tattgtaccc catctcctat gcaatacaat caactactac agattcctgc aa 232

<210> 4208  
 <211> 344  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-002-Q1-E1-E8  
  
 <400> 4208



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cacgataata atcagctgct ttggcgctac aatcatcgtc gatgtcatct tctctatgaa 120  
aggggtgaatc aaattcttct cccattcctc catataaatc gtcactgtca ttagcggtcaa 180  
catcatgtaa aacatctact atgtctaact ctcaacatgg gaagactaat acgtcgtctt 240  
catcgtcttc atcgtcagat catacagctg cagtgataac tggccttgta cttgacgtcg 300  
tgggcttcga tctgctcatg ttaaateccag gtgtacgtgt gttg 344

<210> 4209

<211> 422

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-002-Q1-E1-E9

<400> 4209

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agagatacag cagcggcaag aattttctcc gcaccgcggg cgtgtgctgt tgttcgccgt 120  
ccgcctccgc caagcttgga ggtgtgcgcg gcaaggaaga gacatcgaca tcggcgccag 180  
ctttcgcgcc ggatagcatc aagaaaaggt ggaggaatac gacgttctgg aaaaagaaga 240  
tgaatgccag gaatgagatc ggcgggctgg tggacctcgt caacgatatt tcggccaagt 300  
cagatgagag cctacgggtt agcaaccaca acatgccag cagggcgctg acgttcagtc 360  
agctgagcgc cacatcngac gggttcagtt cgcagaacct gctcggagaa agcggctttg 420  
ga 422

<210> 4210

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F1

<400> 4210

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aaataatgaa gagccgcagc atggcatcat cggccgcgct cttggtgcta gccctcgcgc 120  
tagtggcggc caccgccccca catgtatcgg aggcaaagaa gaagagagcg gcggagagcg 180

gcgagggcggc ggagggcgaag aagatccagg acgacttctg ctcgacgctg tgcgagggca 240  
agaagggggac ggacctggtc gtgtgcaagg agtcctgcgc gctctcccag cagtccaacc 300  
tggtgctgtt cggcaagatt cagtgcaagg gcaaattgcac cgagcagaag ggcatcacgg 360  
cgccggccat gaacgtctgc caggaggagt gcgacaaggc gtacgtggtg 410

<210> 4211

<211> 421

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-002-Q1-E1-F10

<400> 4211

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tggcgggtgg cgtcgggtgtg gtcgccaccg tcaccgcgtc cggcaagaag gccggcgaca 120  
acttcacggg cccggggggag gcttcccttg ccacgtccgg caagtcggtc aagtccttgt 180  
gcgcgcccac cctatacaag gagtcgtgcg agaagacact gtcccaggcc accaatggca 240  
ccgagaaccc caaggagggt ttccacagcg tggccaagggt ggcgctggag tcggtccaga 300  
cggcgggtcga gcagtccaag tcgatcggcg aggccaaaggc cagcgactcc atgaccgaga 360  
gcgcgcgcga ggactgcaag aagctcctgg aggacgccgc cgacgacctg angggcatgc 420  
t 421

<210> 4212

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F11

<400> 4212

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gggaagcggg ggccggcgcg ggccgggaag aaggagatct acgcgaggct cgccaggcct 120  
gtgccttttg gcgacggcaa gaaggaattc tggttggaca agaacaaagg catgatctgt 180  
atggcactgt cgtccaaagc actggtgatt actgggattg atgacagaag atactggcaa 240

cacatgccaa cttcagaatc gagattccag tctgtagcct accttcagca aatctgggtg 300  
 tttgaggtgg ttggtgaagt cgattttctgc ttcctgttg gaacatatag cttgtacttc 360  
 aggggccatc ttgggaagtt ctacagacga tttggccgcc gccagtgcac c 411

<210> 4213  
 <211> 418  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F12

<400> 4213

ccacgcgtcc ggactaactg tgcattctta ttgtcatcag ttactagttt cattgacacg 60  
 tcaatgattt tattaatttt attgctttgt gcagatgctg ttaactagga cacgttgcat 120  
 atgctgattt gtttcgcact actgcattgt agtttttggc tcaacatttg aattcatatg 180  
 caatcaagaa ctttatctta gtgtgctaatt ttgtctgtca tgtagtcat aaataatacc 240  
 tttagttctt aagagttcat actagatgtt ctctgatctg agtgctgcat tctttcgaac 300  
 tatagtgcta agcttgctga tcaagctctt gcctccggaa agatttacga tggagatggg 360  
 ttcaactaca tcaaataatc ttttgaaagt ggtactcttc accttactgg gttgttga 418

<210> 4214  
 <211> 442  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F2

<400> 4214

ccggaaagcc cgggtcgacc cacacgtccg ggaagagtca aagggcacg atgcgaaagc 60  
 gtccgggcct ggtgggtcct tcgacatcac caagttgggc gcctccggca atggcaagac 120  
 agacagcacg aaggctgtgc aggaggcatg ggcacggcg tcggcggca ctgggaagca 180  
 gacaatcctc ataccgaagg gtgacttcct tgtcggacaa ctcaacttca caggcccttg 240  
 caagggcgac gtgaccatcc aggtggatgg caatctgctg gcgaccacgg acctaagcca 300  
 gtacaaggac catggtaatt ggatcgagat tctacgtgtg gataacctgg tcatcaccgg 360  
 caagggaac cttgacgggc aaggcccagc cgtgtggagc aagaactcct ggcacaagaa 420

gtacgactgc aagatccttc cc

442

<210> 4215

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F3

<400> 4215

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aatcacaaag tgatcaaacg atgctcattc taccacgtcg gttccaagac aacttgctgg 120  
cacagcattt ctgttgaact ttgcttttac tacatgatac ttcgaggtgg cattgagacg 180  
taggggttgcc ttgggaatgt gaacttcacc acatttcctg gtccctgccct gaccctgagg 240  
catattgggc ttgcgatacc agggctctag ataagtaaga tatcccactt tgggtattgg 300  
ttgttgatgc tcctgccaat ggcagttagc tggatccaac gggaagggtc agcaccagct 360  
ggtggtgatg taaaatcctt cacttcatga attactgtac cattaccgtt tc 412

<210> 4216

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F4

<400> 4216

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gctggacgtg ctcaagttcg ccatccgcta cgcgtctccc ggcaaggcct ggaacaacat 120  
caacaacaag acggccttca ccaaccgcac cgactacggc aaggcgagc gagaggcgca 180  
gtgggcccacg gcacagagga cgctgcacgg cctcaaccag gccaccgcca cctccgacct 240  
cttcggcgac aaccagggct accgcgagct gtcggagctc gccgagcagg cggccaagcg 300  
cgccgaggtg gccaggetca gggagctgca cacgtcaag ggacacgtcg agtccgtcgt 360  
caagctcaag ggctcgcaca ttgacaccat tcagcagagc tacaccgtgt aaactcgact 420  
cagttt 426

<210> 4217

<211> 400  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F5

<400> 4217

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tcgtcgtcgt cgtctcgttc tgtggctcgt gatatccgcg caaacaatgc tagttgccgc 120  
cgcgcccggc gccaaagcgc aggcgcgcgt gatgttcgtg ttccggcgact cgacgctgga 180  
cgtcgggaac aacaacttcc tgtcgggggc ggccgtcccc agggccaaca agccccacta 240  
cggcgtcgac ttccccgcgc gccatccac cggaagggtc agcaatggcg acaacacggc 300  
tgacttcgtc gcgaagagca tggggttgaa gagtagccct ccgccgtatc tgctcgttgc 360  
acccaacggc tccagccctc tgctcgcgca gactgctctc 400

<210> 4218  
<211> 389  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F6

<400> 4218

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agaggtagct cctcgatcat gtccagtcac accaccacca tctccagttg agacactagt 120  
tccaccatca cagtcacgc caccggaaga agcagttagc tcaacacctc aagcaccagt 180  
gtcgtcatct ccacgagctc ctgtacgctc agtacctcca ctgaagtccg cgccgcctcg 240  
agtagtagag agcgcaccac caccgacaat atagtcacac cttccactgg ctccactgag 300  
ctcaccagct catgtatgag aagacttctc gcatgacttg caccagtgaa ctcagcagct 360  
ccgtcatcta cgtcatcagt accagtagc 389

<210> 4219  
<211> 409  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F7

<400> 4219

ccacacgtcc ggagttcctc cacgagaagg ccgatcctcg agtgggtccac cgcgacatca 60

agtcaagcaa catactgctc tttgaccatg atgttgcgaa gatcggggac ttcgacatct 120

caaaccaggc ccctgacatg gctgcgcgcc tccactctac tcgcgttctt ggcacctttg 180

gctaccatgc accagaatat gccatgactg gacagcttag cacgaagagt gatgtctaca 240

gctttggagt tgtgctgcct ggagctttta accggtcgca agccagttga ccacacactg 300

ccccgtggcc agcagagcct tgtgacatgg gctacaccga ggcttagtga agacaagggtg 360

aggcaatgcg tcgatccaag gctcggagac gaataccctc caaaggctg 409

<210> 4220

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F8

<400> 4220

cggaattccc gggacgaccc acacgtccga tctcctccat caccaccacc aagctcaaca 60

acagccagct cgcgaaaata atgaagagcc gcagcatggc atcatcggcc gcgctcttgg 120

tgctagccct cgcgctagtg gcggacaccg cccacaggt agcggaggca aagaagaaga 180

gagcggcgga gagcggcgag gcggcggagg cgaagaagat ccaggacgac ttctgctcga 240

cgctgtgcga gggcaagaag gggacggacc tggtcgtgtg caaggagtcc tgcgcgtctc 300

cccagcagtc caacctggtg ctgtacggca ggatccagtg caagggcaaa tgcaccgagc 360

agaagggcat cacggcgccg gccatgaagg tctgtcagga ggagtgcgac aaggcgtacg 420

tggtgaaggc ggccg 435

<210> 4221

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G10

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gtcttccatg gcctcctcgt agtagaatag ttctatctca ccgcaacaac tcctcattac 120  
atcctttatg agaggctgat cgattggtag atacgtactc gggaggagca gagcaacgag 180  
agacatggcg acgacgacgc gtgttgccgc cgcgcacc ccggtgctgc tggctcctgctc 240  
ggcgttggcg accctggcgc gggccgagga cccgtacctg ttcttcgagt ggaagggtgac 300  
gtacgggatc aagtccctgc tgggcgtgcc ccagaaggtc atcctcatca acggcgagtt 360  
ccccggcccc aggatcaact gctcctccaa caacaacatc gtcgtcaacg tcttcaacca 420  
gct 423

<210> 4222  
<211> 365  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G11

<400> 4222

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ctgaacacac gcatgggtgcg cataggcgag gccaaaggcca ccgcgagggga tcgtgtggctc 120  
agctgggatg gcaatgcgat gcacctccgc cgcgctgctc gtgctggcgc tcgtcgccac 180  
cgtagtgcgc gcggaggacc cctaccactt cttcgagtgg aacgtgacgt atgggacgaa 240  
cagcatcatg gggactccgc agaaccgtga ttctcatcaa tgatctgttc ctcggacgta 300  
acatcaactg cacattcaat aacaagatcg tcatcaatgt cttcaatatg ctcgagcaac 360  
tgctc 365

<210> 4223  
<211> 416  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G12

<400> 4223

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aaggaaaccg aagccccgat gacaagcttc ttcagggacg cgcgcctccc gcagcagcgc 120  
gtcgtcgagg gcgtcccctt cccggcggtg ctggtcccga gcgctcgtgc gggctcctgc 180

gccccggggg tcgacaagtt cctggcgggc gtgcgctgcg agagggcgtc ccggctggag 240  
ccgctggtgc gggacgcggg ggccctgctg ctgcgagggg tccccgcgac gacggccgcc 300  
gacttcgacc gcaccgtcga cgccttcggg tacgaggagc tgccaatcgt cggcagcgtc 360  
gcgcgcggga ccaacgtcgt gggccgggtg ttcaccgcca acgactcgcc gcccgga 416

<210> 4224

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G2

<400> 4224

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caccaccca tcgaggttgg ggccgccagc aggttcagcc gttcctgttc ttgataaaac 120  
gagagaagga tggcagtgtt tcagggagct gtcctagtct tgtttctcct cctcgtcgca 180  
tcagatgtgg gaaccatcga tgccaaaatg ggagtagcca tgcacatgca tgccttgata 240  
atggagaaaag cgacacagca tgacacggcg aagaacgagg agaatatcac ggataaggaa 300  
cagagtcaat gcttatcgcc gagtctccaa ttcgagggct tctgcttcaa cagtgcaga 360  
tgcgcccacg tgtgcatgaa 380

<210> 4225

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G3

<400> 4225

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gagctggaga tggaggatgg agaggggaca aggtttccgg ggccgagtcc gagacggacc 120  
ccgcgccggc acgatccggt ggatgaagtg catcacacct tgagggacgc cccttgagaca 180  
gcagtttgtg ctgcaaattc tatatagctc tgtcgcagca tggcctcggg gggcgtggca 240  
cgcgcttctt tgggatttca gaatggcaca agttctagca gtgaccaga tcgtcatccc 300  
aacgagttgg gcagtatgag cattccggac gacaaggacg ttgacgatat tgtagtcaat 360



ggcaatgggg cggaacctgg gcatatcata gtgaccagca ttgatgggag aaatgggcaa 420

<210> 4226

<211> 429

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-002-Q1-E1-G4

<400> 4226

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catcccgaag gtgcaagtct ctaacgcggc ggggcagaag atcaaggcct acatccacaa 180

ggcgcggggac ccgacggcga cgttcgtctt caaaggggca gcgttcaaca cccaagggtc 240

gccgatggtg gcgcccttct cctcgcgggg cccgaacagg aggagccgtg ggattctgaa 300

acccgacata atcggccccg ggggtgaacat catcgccggc gtgccctcga tcgangacgt 360

ggacctgctg cgcaacgcgg aggtgcccac gttcgacata aagtccggca cgtccatggc 420

cgcgccgca 429

<210> 4227

<211> 457

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G5

<400> 4227

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cgccgtagtg ctggacaaca atggcgctga cgcggtctcc tgcactgcca tccctagcgt 180

aacaataagc ctagaggaga aagaaaatat caatggggat gttcccacga tcacctcggc 240

cgcaagcaac gaggaggagg cgttgttcag tgtcggagaa tccaccaagg acgatggcca 300

tcgcttgacg atggaatgct cactcccgt ctctccagt agcccttcca ctgcgaagaa 360

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catgaagaag acagacgacg acaccacgag cccaag 457

<210> 4228  
 <211> 443  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-002-Q1-E1-G6  
  
 <400> 4228  
  
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 ctctgctcggg gccgaggact ttctacaacc agcttcccga ctggagcatg ctcccttgctg 180  
 ccatcacaac catctttcttg gccgccgaga agcagtggac gatgcttgac tggaagccca 240  
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 tgttcaggca gaacttctcc attaggtcct atgagattgg ggctgatagg acggcatcta 360  
 tagagacaat gatgaaccat ttgcaggaaa cggcacttaa tcatgtgaag accgctgggc 420  
 tgccagggtga tggattcggc tcc 443

<210> 4229  
 <211> 301  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-002-Q1-E1-G7  
  
 <400> 4229  
  
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 gtgccgccgg cgatcccgat ccgccgaccc gtcccagccc cgctcgcagc catgtcgccg 120  
 tcggagccga cgcgggagga gagcgtgtac atggccaagc ttgcggagca ggcggagcgg 180  
 tacgaggaga tggtcgagtt catggagcgc gtcgcgcgct acgccggggg cgcgggcggc 240  
 ggggacgagc tcgcggtgga ggagcgcaac ctgctgtcag tcgcctacac taacgtcagc 300  
 g 301

<210> 4230  
 <211> 440  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G8

<400> 4230

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ccatcaacaa tcgccgagag cgatcgagag ataaataaag atgaagaaag tggcatcatc 120  
gtcagccggtt ctcttcgtgc tagccctgac gctagtttgt gccccgctga tagcagaggc 180  
aaagaagaag agagtcgccg ccgccgccgc cgaggagaag aaggtgcagg acaacttctg 240  
ctcgacgctg tgcgagggca ggaaggggat ggacctggtg gtgtgcaagg agtcctgcga 300  
cctctcacag cgctccaacc tgggtgctgta cggccggatc cagtgcagg gcaagtgcac 360  
cgagcagaag ggcataccg cgccgcagat gaaggtgtgc caagaggcgt gcgacaacga 420  
ctacgtggtc aaggcggctg 440

<210> 4231

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G9

<400> 4231

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ggaactcctg caccaagaag tacgactgca cgatacttcc caactcgctg gtgatggact 120  
tcgtgaacaa cggggaggtg tccgggatca cgctgctcaa ctccaacttc ttccacatga 180  
acatgtacca gtgctgaac atgctgatca ggcacatgac cgtgacggcg cccggggaca 240  
tccccaacac ggatggcatc gacatgggag actcatcagg gatcaccatc atcaacaccg 300  
tcattggcgt cggctacgac tgcactcca tcggccctga gacctccaac gtgaacatca 360  
ctggcgtgac ctgcggcgcc tgccacagca tcagcatcgg cag 403

<210> 4232

<211> 188

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-H1

<400> 4232

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 agcgaatcat gtcgagatat caccatcggc ccaggctctt gcagaaacga ggaaaaaata 120  
 catgtcatct cgctgggtta gggcggctgt gtatccgatg ttctcgacga caggggtagt 180  
 gctgggga 188

<210> 4233  
 <211> 422  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-002-Q1-E1-H11

<400> 4233

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 gtaggctact gtatcgccgg ctctcccag cgcctgcttg tctacgagtt cgtgccaac 180  
 aacaccctcg agcaccacct ccacgggaag ggtgtgccgg tgatggcctg gccggcgagg 240  
 cttgccatcg cctcggctc cgccaagggc ttggcttacc tgcacgaaga ttgccacccc 300  
 aggatcatcc accgtgacat caaggcagcc aacatccttc tggacgagaa tttcgaggct 360  
 aaggtcncgg gtttcggact ttgccaagct gacacagaca ccaacacgca cgtctccacg 420  
 cg 422

<210> 4234  
 <211> 430  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-002-Q1-E1-H12

<400> 4234

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 aggcaagagc tgcagacgtc aatccagaat acgaggctgc agggatcgat acctggccag 120  
 aagatgaggg agcaatcgta gagtcatcag acgacgcaag gcaactggacg tcagacaacg 180  
 ttgcaatgtc caagtctaga atgtcagctc attggtcaga acagatcggc tgcacagaac 240

gctagattga tatcagcaca aagacagctc atccattcct cagaattcaa ggcctctcgt 300  
ggagtacaac agtatacagt acaaagaagg atatccagtg atgacagaca agtaatgcat 360  
agctatcaca aatttgctgg caacgacgat gaagacgata gtgacatgga aactgatttt 420  
gctancatac 430

<210> 4235  
<211> 336  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-H2

<400> 4235

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aggaggacaa ggaggaggca ctaacagtgg cggcgaaaca tgagccagca ggcatcattg 120  
agcctcatca gattgctagt gaggtgacca cttcgggagt ggcggtcgtc gttgtcgaac 180  
ctgagaacag agtcgacgag gaagttgtgg agaagaccgt catcgagaag gagatgccat 240  
cagcagtcca tgcagacgaa aatattgcca ccatcaaggt ggcaaccgag cccaggacag 300  
tattgaagaa cgacaccgtg gaggagatat agatgg 336

<210> 4236  
<211> 362  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-H3

<400> 4236

ccggatatgc cgggtgaccc acgagtccgc ccggtcccgg agctgggtcct tcgtggagcg 60  
gcccggcgcg ctgctggtga tcgccttcct ggcggcgcag ctggtggcga cgtgcatcgc 120  
cgtgtacgcc aactgggagt tctgcaagat gcagggcatc ggctggggct ggggcggcg 180  
catctgggcg ttcagcgtcg tcacctactt cccgctgtac gtgctcaagt tcggcatccg 240  
ctacgcgtc tccggcaagg cctgggagaa catcagcaac aagacgggct tcaccaggcg 300  
taccgactac tgcaaggggg agcgagacgc gcagtgggcc acgggacaaa ggacgctgca 360  
cg 362

<210> 4237  
 <211> 428  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-H4

<400> 4237

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ccgggtcgac ccacacgtcc ggcacatcgg aaccaacgcc caagaaacac cggttccatc   60
ttcattctga tttttgtcag atgttcgaga tggtgacttt ggcagcaaac tatctggcag  120
aagatcagaa tggttactag catcctctat tggaagcaaa tcacacggac cgtgacctaa  180
actaatttaa ctatgaagtg tgaccaatag aggagatata agtgggggtca caatggagga  240
gaccaaagcg gggagatcga agacaaagga ggcctcctgt gcatggtttg tttctgtttt  300
cccctttcga gttcttttctt gcgacaatct tgggtcgcac aaatgggtgt tgtaagtaat  360
gatctgtagc taaaaatgta tgatggggga gtgattgctt ccatacatg ttccttcgag  420
ggctatgt                                         428
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<210> 4238  
 <211> 396  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-H5

<400> 4238

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agttgcgcgg catcgcatga acacactgtc acccgacctg tgcaccagaa ctgcggagaa  180
tcacgtcagt aggtataacg tggtagatgc tgtgacggtg ctagaaatgc aagtggacgc  240
ttacaagata cgtgtcaagg ccgttcggat gctcgccaac gatgaggtca aactgcagc  300
gacgcccgac gtgctgatgg agcagaagct ctgcagtacc tactatctgg acgtcgccga  360
caagctcggg acctgcaagc gctccatcag tttccg                                         396
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<210> 4239  
 <211> 419

<212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-002-Q1-E1-H6  
  
 <400> 4239  
  
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 ttccggcgctcc gcatcaaggc gtacgaggac gccgcctccg tgctcaccgt ctccaagatc 120  
 cactacgaga atatcaagat ggaggactca gccaaaccca tcttcacga catgaagtac 180  
 tgccccaaca agttgtgtac tgccaacggc gcctccaagg tcaccgtcaa ggatgtcacc 240  
 ttcaagaaca tcaccggcac ctctccacc ccggaggccg ttagcctgct ctgcactgcc 300  
 aaggtcccat gcaccggcgt caccatggat gacgtcaacg tcgagtatag cgggaccagc 360  
 aacaagacca tggctatatg cacgaacgcc aacggcagca ccaatggttg cctcaagga 419

<210> 4240  
 <211> 402  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-002-Q1-E1-H7  
  
 <400> 4240  
  
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 agcgtgctgc caaccacgac gtagcacatg caatggcact cgcggccgtg gcgctgccgt 120  
 cgtcctcgat cgtcggcctg gtgtctagct gcacggaacc gcagccatgc agacgatctc 180  
 gaccgtacgc cgtgtgtagc cggccccggc caccgcccac tgctgccaac tgcccagtga 240  
 tgacgacccg gccatgtccg ccgtacgcac ggtcctgct ctcgatcgta cgcctgagc 300  
 aacaggagtt ctgtccggcg ctggaggctg gtccttgctc tggctagagc tagcccgccc 360  
 gccggtcaca cggatcggat ctctccatcc actcccagct gt 402

<210> 4241  
 <211> 417  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-002-Q1-E1-H8  
  
 <400> 4241

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 gcggcaccag gcgggtggcg tccgggtgca gggggacctc gcggcgttct acaactgccg 120  
 gttcgacgcy ttccaggaca cgctgtacgt gcacgcgcgg cggcagttct tccgcaactg 180  
 cgtggtctcc ggcaccatcg acttcatctt cggcaactcg gcggcggtgt tccagaactg 240  
 cctcatcatc acgcgggcgc ccatggacaa ccagcagaac tcggtgactg cgcacgggcy 300  
 caccgacccc aacatgaagt ccgggctcgt catccagaac tgccgcctgg tgcccgacca 360  
 gaagctgttc ccggaccgct caagatcccc tcgtacctgg gccgcccctg gaaggag 417

<210> 4242  
 <211> 386  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A11

<400> 4242

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 acagccagct cgcgaaaata atgaagagcc gcagcatggc atcatcggcc gcgctcttgg 120  
 tgctagccct cgcgctagtg gcggccaccg cccacaggt agcggaggca aagaagaaga 180  
 gagcggcgga gagcggcgag gcggcgagg cgaagaagat ccaggacgac ttctgctcga 240  
 cgctgtgcga gggcaagaag gggacggacc tggctgtgtg caaggagtcc tgccgcgtct 300  
 cccagcagtc caacctggtg ctgtacggca ggatccagtg caagggcaag tgcaccgagc 360  
 agaagggcat cacggcgccg gccatg 386

<210> 4243  
 <211> 410  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A2

<400> 4243

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 tgtgatgaca aaaattgtgg caatgcagat tatgttgatg atcttgatga catttcccaa 120  
 gaagatacct gtggtagttc tgatcctggc aatggaattg cggaagataa atttgaggtc 180



aatggatctg ctcaaataaa gcggtccaaaa tttcaaaagg gtgtcttacg tacaaactgt 240  
 atagattggt tggatcgac aaatgttgct caatatgcct atggcctagc tgcttttagga 300  
 caccagttac atgcacttgg ttctgtagaa tctccagaag ttcattctaga ctctcctttg 360  
 tctcgacatt tgatgcattt ttatgaacgc atgggtgaca cacttgcttt 410

<210> 4244  
 <211> 398  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A7

<400> 4244

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 ggagggtttc cggataaacg atcatcctgt tccagaggaa gagataaaga tgttgttaca 120  
 agcgggcgat atacatggaa ctgacacatt agattgtgag gaatttgtga cagtcttgct 180  
 tcacattaaa aagatgagta atgacgagta tctacctaaa gctttcgagt tcttcgacaa 240  
 agacgggaat ggttttattg aaatgtccga gttaatggag actctaagtg atggtgaact 300  
 aaagcctgat gagcaattgg ttaacgacat tattcaagag gttgacaagg ataaggatgg 360  
 tcgcatcagt taccagagt ttgaattgat gatgaaaa 398

<210> 4245  
 <211> 387  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A8

<400> 4245

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 cccagggagc ggacgcgggc gggccggcgg gcggccatgg acgtggactg cgtctcgctg 120  
 cccgacgcc cggcgggcga cgtggatggc ggcgccgcc ggccgtggcc caaggacgtg 180  
 accaacagag gcgccacga gctgctggag tgcccctgtg gcaccaactc catgttcccg 240  
 ccgatccacc agtgcccaa tggacacacg ctgtgttcca catgcaaggc cagagtacac 300  
 aaccgttgcc ctacctgcaa gcaagagctg ggcgacatca agtgccctggc gctggagaaa 360

gtcgccgagt cgatggagct cccctgc

387

<210> 4246

<211> 460

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-B10

<400> 4246

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cctccagatc gcgcaggaga aggccggcat cgtgcccata tcctatcgca ggggtggcgtg 120  
cggaagcag ggcggcatcc ggtacacat caccgggaac aagtacttca acatggtgac 180  
gatcaccaac gtggggcggcg ccggcgacat cgcggcggtg tcggtgaagg ggagcaagcg 240  
cgtcaagtgg acggagatga aacgcaactg ggggcaagtg tggcagaccg gggaagacct 300  
cacctgcgag tcgctgacgt tccgggtgat gactagcgac caccgcaagg ccacctcatg 360  
gcacgttctc cccgctgact gggagttcgg cgtcacgtac caggcgtcca agaacttcta 420  
agtagccact ttccctcctc ttcttcaacc tgcattgccg 460

<210> 4247

<211> 397

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-003-Q1-E1-B2

<400> 4247

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tcaccaccat gtgcacagcc accttctccg tcgaagcgte cgggttcata tgcattgaaca 120  
tggggttcca caacacggac ggcgcggagc ggcaccatgc ggtggcgctc cgggtgcagg 180  
gggacctcgc ggtgtttctac aactgccggt tcgacgcggt ccaggacacg ctgtacgtgc 240  
acgcacggcg gcagttcttc cgcaactgcc tgggtctccg taccatcgac ttcatcttcg 300  
gcaactcggc ggcggtgttc cagaactgcc tcatcatcac cctgcgtgcc atcgtcaacc 360  
agcagaactc ggtgcacatg cacgggcgca ccgaccc 397

<210> 4248  
<211> 390  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-B4

<400> 4248

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acgacgcgcc gccacagcca catggcggac gacgccgtcg ccgccggagc ggccgtttgc 120  
tgcgcagggc cggcctcgct gtcttctagc aggaagcagc agcagcagcc cgacgacgcc 180  
ggctgcggca gcagcagcag cgacgaccac taccagcagc acgtgatcat gctgaggcgg 240  
acgaggagcg ggccggcatt cccgccgccg atctccgtga tcggcaaggg cgggcggccg 300  
tggtcttgcc tgcggggcga ccgcgagggg ggacgcctcg tgctgcggca gatgcgcctg 360  
ccgtcgcagg agctgctgca gccctgcaag 390

<210> 4249  
<211> 257  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<223> Clone ID: LIB148-003-Q1-E1-B5

<400> 4249

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tgccgaaatg cagcggggcc ctctccggcg gtctctgccg gctgggtcgg ngcaagacgc 120  
ccgatctgtt ggtgctccgc gaaaccaaac atttggcggg cccctacctt gatgttggtg 180  
gaatcctgaa caacgaaagc tcctgtcccg gttccccggg ggtcctaaca acttcgctcg 240  
gtccgctcca atgcca 257

<210> 4250  
<211> 369  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-B6

<400> 4250

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 gatcatcagc atccacatcg gccaggcccg gatccaggtc ggcaacgcct gctgggagct 180  
 ctactgcctc gagcacggca tcgagcacga tggcaccatg cccagtgatt cctcggttgg 240  
 cgtcgcacat gatgccttca acacgttctt cagcgagact ggttccggca agcatgtgcc 300  
 cagggccatc ttcgtcgacc ttgagccac tgatcatgac gaggttcgca ctggctcgta 360  
 ccgccagct 369

<210> 4251  
 <211> 411  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-003-Q1-E1-B7  
 <400> 4251

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 gccgccgcaa ccgccacatc agccatgggc gcctgcgcaa ccaagcccaa gacgcttgag 120  
 gggcaggccc cagctgaggg cgccgtctcc acacccaagg ttgcgcccga ggccactcca 180  
 atctccgttg aggttgcggc tgatgaacag gtagctgaga aggtggtggt ggaggagccg 240  
 gctgcggcgg ccgacgttga gcatcagaag gctaattgagg tgctcgctcc agaggcggcc 300  
 gtcgccgagc ccgaccacaa ggaggaggaa gccgtggaga agaccgtcgt cgaggaggag 360  
 aagccagcgg cagcagccca tgcagaggaa aaggtcgcca ccgccgccga g 411

<210> 4252  
 <211> 213  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-003-Q1-E1-B8  
 <400> 4252

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 atcaccgata tgcacgtacg gcagccaccg aagcacacgg gcggagaacg actcggatat 120  
 catcagcatc cacatcggca aggccggggt ccaggccagc acatcctgcg tggaggtcga 180

ctgcctcgag cagggcatcg agcacgatgg gtc

213

<210> 4253

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-C1

<400> 4253

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ggactatcat gagcaaggta gcagatgcat ccaaggagga gatccactcc atcgagtcgg 120  
tgaaggaggc aaatgcacgg cgggctcaga aaatcaacag ccgcgttggt cgctactaca 180  
aagcagcagg agccacagaa ggcgcggcgc cggcgccggc gccagaagca acctgatcga 240  
ggagaacgtt agaacagtag ctcaccctcc cgagagtatg ggttgaaaat ctttggcgaa 300  
ttgatgtctc gatgcaaatt aaacaggcat gccatctttg tgtaaacaga aattttacac 360  
actaagttcc actccctata ctactacat aatttttagta atgtaaatac tttgaaagaa 420  
tgcttaaata taa 433

<210> 4254

<211> 390

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-C4

<400> 4254

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tatggacgga ttggtaggcc tcttgaaagt tcgcgtggtc cggggatatca accttgcccta 180  
ccgcgacgca agaggcagcg atccaaactg aagacaagcg tgaagaagag atccgtgaac 240  
cccatatggc aagaggagct aactctgacc gtcacagatc ccagccaacc actgaagctg 300  
gaggtgttcg acaaggacac cttcagcaga gacgaccca tgggagacgc ggaggtggac 360  
gtggcgccac tgatggaggc ggtgagcatg 390

<210> 4255  
 <211> 334  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-003-Q1-E1-C7

<400> 4255

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 tcgctggccc ataaatatat atctatctat cgccatcgag caattataat ctcacagaat 120  
 aataaacatc atggggcaag cctcacggct cgctcctcctc gccgtcggtg cgctgctgtc 180  
 cgccggcctc ctcccgcagg cgctgggtaa gggtangggg ggcaggggac acggtgggcg 240  
 cgtaaccccg caggctgcgc gcactctgtc tcggcacccg ttcccgggaag ttttcacgtt 300  
 caacggcggg ccggaagcgt tcaagttacc ggtc 334

<210> 4256  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D8

<400> 4256

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 gcgcgcagat gcccctcgcg ccgcggtcct cctcgctcggc gaaccggcac aggggaagcac 180  
 caccgcctcc gacgcctaga aattctggag cgtagcaggg taccgtaccg cgcgtcggcg 240  
 agctctgttt gcggcggttg gtactgaaga tgaagaagtc cgactgatgg tttcttataa 300  
 taatatgcat ccaagacatc gtacgttaca gtctcccatg atctgtgtat gtaacgtgga 360  
 tatacaattg aatatgtgga ggactgtgcg acatgcgttg aagtcggagg gaggattgta 420  
 tgctgt 426

<210> 4257  
 <211> 429  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D9

<400> 4257

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tcgccccggg gctcacgctc accaccgagc cccaaccaat taataatata tatatatagc 180  
taggatcgat cgtcagtaaa atggcaggct ccgcgcgtcct gaggagcccc ctgtccgtcc 240  
tcctctacat cctcgccgcc gtgcccgcc ccgcgcgggc gacgccgacc gacgccgcc 300  
tcgacgaggc gtacgcgcat ctctcaacc tcaccgctaa ccaggagtac tgggcggagc 360  
gcgcggaggc ggcgcacgcg tacaaccgcg cggcgtagca gaccgacccc gtggccgctc 420  
tgcagcgct 429

<210> 4258

<211> 453

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-E10

<400> 4258

ggtctagacc tcccgggtcg acccacgcgt caagtaggtg cattgcttcg gtgggtccacc 60  
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gcgtccgcgc tccttgggtgc ggcgcgggcc gccgcgaacg cgcggggcgg ggcgttcagc 180  
aactgggtgg cgatgaacca gcagagctac gcgtgtacg cgcagaagtc cgtcggggac 240  
gggggcaagg agcccctgga caagaagctg tcggaggcgg acaagaagaa ggtcacgtac 300  
gtggtggacc ccagcggcaa cggcgactac accagcatca ccgcggcgct ggaggatata 360  
ccggtgagca acaccaagcg cgtgatcctg gatctcaagc gggcgctca gttccgccag 420  
aagctgttcc tgaacatcag caagccgttc atc 453

<210> 4259

<211> 456

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-E11

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aggcgacccc ggcgcggctg gcggagctgt tcgtgaacat cgcggccgag aagggatccg 120

ggatggccac gttcgtgcac gggaagtaca acaacgcca ggacagcacc gtgttcaagt 180

gctacgacag ctgctcggac gacgtcgagg aggccgtcgc ccacctcaac ggctcgtcc 240

gggagcccac cgacgccaaag ttcctggagc tcaagtcgtg gctctcctcc acgctcggcg 300

gcacctccac ctgcgaggac gcttgaagg acctgccaa gaacggcgac aaggacgacg 360

tcgtcaactt cagcctcgac ttcgagaagc tgcagcgcgt cagctggac ctcacaccg 420

aggcatccgg attcatgttc gcaggcatcg cctgc 456

<210> 4260

<211> 449

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-008-Q1-E1-E4

<400> 4260

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atgaagagcc gcagcatggc atcatcggcc gcgctcttgg tgctagccct cgcgctagtg 120

gcggccaccg cccacaggt agcggaggca aagaagaaga gagcggcgga gagcggcgag 180

gcggcgagg cgaagaagat ccaggacgac ttctgctcga cgctgtgcga gggcaagaag 240

gggacggacc tggtcgtgtg caaggagtcc tgcgcgtct cncagcagtc caacctggtg 300

ctgtacggca ggatccagtg caagggaag tgcaccgaac aagaaggcat cncgcgccg 360

gccatgaagg tctgccanga ggagtgcgac aaggcgtacg tggatgaaggc ggccgaggtc 420

accaaggcct gcagcgtcac ctgcgcaa 449

<210> 4261

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-E6

<400> 4261



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acgatgacga ctaataagcc cctcctcctc ctgcacctgg cgtcgcgcgt ccttggtgcg 120  
gcgccggccg ccgcgaacgc gcccggcggg gcgttcagca actgggtggc gatgaaccag 180  
cagagctacg cgctgtacgc gcagaagtcc gtcggggacg ggggcaagga gccctggac 240  
aagaagctgt cggaggcgga gaagaagaag gtcacgtacg tgggtggacc cagcggcaag 300  
ggcgactaca ccaacatcac cgcggcgctg gaggatatcc cggtgagcaa caccaagcgc 360  
gtgatcctgg atctcaagcc cggcgctcag ttccgcgaga agctgttctt gaacatcagc 420  
aagccgttca tcacgt 436

<210> 4262  
<211> 375  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-008-Q1-E1-E7  
<400> 4262

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taatgttatt cgttacttcc ctactcaggc tttgaacttt gcatttaagg actacttcaa 120  
gaggttggtc aacttcaaga aggataggga tggctattgg aagtggtttg ctggcaacct 180  
ggcctctggt ggtgctgctg gtgcttctc tttgtttttt gtgtactccc tggactacgc 240  
gagaacaagg ttggctaatt acgcgaaggc tgccaaggga ggaggtgaaa ggcagttcaa 300  
tgggcttgct catgtctacc gcaggacact caagtctgat ggtattgctg gggctttacc 360  
gtggatttaa catct 375

<210> 4263  
<211> 433  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-008-Q1-E1-E8  
<400> 4263

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tgagggcacc gcctgttgac acccttgccg atgacctgca cacctctgac tgctgcatg 120

agctccggcc cggcgaccac atcgagattc agtggagaag gaacaaagaa ttcccatacg 180  
gctggtggta tggagttggt gggcacttgg agtcatgtga tggaagcgaa cacttttgtc 240  
ggtgccatct tagtgatacc gtggtgctgg agtttaatca gtacacgccg ggctcaaggt 300  
ggaggcaagc gttggtgaag cggaaggagc ataaggagga gggcaacgag ggcgacgggt 360  
tctacggcgg cataaggaag ctccgcgga aggatgacat ctccaagtgg aggcagctgt 420  
ggccaacaga cgt 433

<210> 4264  
<211> 460  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-008-Q1-E1-E9  
<400> 4264

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acgatcgaac gagcacaggc acgcacgcac catggcccg cgtctcgccc tcgcctcctt 120  
cctcctcgtc gcctccgcca ccgtggcttt cgccgaggag gcccggcgag cctcgccgaa 180  
gcattcgccc tccacgccgt caaaggcgcc cagcagttcg cccgacaagt ccgagaaggc 240  
ccccacggcg tcgggtgaga atgctgcaga gacgccgaag gcaaccccg ccaaggcccc 300  
ggcggcgccc tccaagtcag aggcacgcc ttccgaggcg cccgactccg ggtccagcgc 360  
tgcgtcacct actagcgaga ggcgcgcgtc agagaaggcc cccgcccgtg cccccaagga 420  
ctcgtcggcc agcccttcg cgtcnccgtc cgaagatgaa 460

<210> 4265  
<211> 412  
<212> DNA  
<213> Zea mays  
<223> unsure at all n locations  
<223> Clone ID: LIB148-008-Q1-E1-F1  
<400> 4265

tacggctcca gaattccaag gtcgaccac gcgtccagtc gtcgagccca tcctgctcga 60  
ggtcgaccag atctaccacc tcgcctgccc cgcgtcnccc gtccactaca aatacaacct 120

catcaaaaca atcaagacca atgtggttgg gactctgaac atgcttggat tggcaaagag 180  
gatcaatgct aggttcctcc tcaccagtac cagtgaggtc tatggtgata ccctccagca 240  
cccgaggtg gagacttact ggggcaatgt caatcccatc ggtgtcagga gctgttacga 300  
tgagggcaag cgtacagccg aaacgttgac catggattac caccgtggtg ccaaccttga 360  
ggttaggata gcacgtatct tcaacacata tggccctcgc atgtgcattg ac 412

<210> 4266  
<211> 220  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F10

<400> 4266

ggtctagact tcccgggtcg acccacgct ccacctcgtc ccacctccc tccctcatac 60  
aaataataac agaaaggctc cgcccttttc ctccgacatc cacatggggg gaggggaaaa 120  
cacttacatt caccggggcg aactaatggc ctccgttcgg gctccggcga ctacaaccgc 180  
cgccgtcatc ctatgcctat gcgtcgtcct ctctgtgcc 220

<210> 4267  
<211> 445  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F11

<400> 4267

tcccgggtcg acccacgct ccaaggcaag ggcgcaacca ataatagcaa gtgtgatcat 60  
ccgttgatcc atcttgctaa taagcctgcg tgcccttcgt tcttctcgt ctcgatcccg 120  
acgacgctcc gttcggctcc ggcaaaccac atcaagtcgc gatggagatg aagaaggctc 180  
cctgcgccgt cctgcgcgcc gccgcctcgg ccaccgtggt cctgcgcgcc gagggccccg 240  
cgccccccc caccagcgcc tcctcgcccg cgttcccggc cgtcggcgcc gtgctgggcg 300  
cctccgtgct ctcttcttc gctactacc tgcagtaaaa ttaaaggagg atcggaggga 360  
gaggctgctg gctgccattg cctgtattcg gttggattcc gtttatatat atatttaagt 420  
accttaattt gggctctgaac atgtc 445

<210> 4268  
 <211> 437  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F12

<400> 4268

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accggtctag aattcccggg ccgaccacg cgtccatccg atccatcaac aatcgccgag   60
agcgatcgag agataaataa agatgaagaa agtggcatca tcgtcagccg ttctcttcgt  120
gctagccctg acgctagttt gtgccccgct gatagcagag gcaaagaaga agagagtcgc  180
cgccgccgcc gccgaggaga agaaggtgca ggataacttc tgctcgacgc tgtgcgaggg  240
caggaagggg atggacctgg tgggtgtgcaa ggagtcctgc gacctctcac agcgctccaa  300
cctggtgctg tacggccgga tccagtgcaa gggcaagtgc accgagcaga agggcatcac  360
cgcgccgcaa gatgaagtgt gccaagaggc gtgcgacaaa gactacgtgg tcaaggcggc  420
tgaaggtcac aaggcct                                         437
```

<210> 4269  
 <211> 449  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F2

<400> 4269

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attcctaggt cgacccgccc gtccacggcg ttcaccgagt tcaagaccga tgacatggcc   60
aacatcatga aggacttcga cgagccaggg cacctcgcgc cgacatgcct gttcctcggg  120
cctaacaagt acatgggtcat ccaacgcgag cctggtgccc tcatccgtgg caagaatgga  180
tcaggaagca tcaccgtgaa gaagacaggg catgcactcg tggttggtat ctacgatgag  240
ccgatgacgc ctgcgacgtg caccatggtg gtggaaaagc tgtgcgacta cctggcttaa  300
caagggatgt aactactacg tagcagctgg catgcatgtc gacgaccatg gttttcaatt  360
tcgacttcca ataatactga caacaaagca ataggcttcc tcccggcgta attgctttgg  420
ctcttctcct ccacgcgata ggatatcta                                         449
```

<210> 4270  
 <211> 455  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F3

<400> 4270

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 gaccaaaggc tacatgggtcc tctaccgcaa ctattttctgc aaacatcgag ctgatctcgg 120  
 agccccggagc tgcaatctga caacagtgcg tgtcgcaaca ggagatcggg tcaccggaat 180  
 cgatagaaaag gacgattaga ctatgggtgcc ccgaattacc aatcgaatta cacgccacag 240  
 atcgcgggctt gggatttggg acgtccccaa atcagaacct cggacttagc ggcacagggc 300  
 cagggatgaa aacggtcgga aacgggtattt attcggtaat cagtttttta gtcgtttttc 360  
 tttgattgcg aataaataga atatagaatc tatcatataa atttgatttc ctgtttttta 420  
 cattcagttt gtaaagattc ataaaagata aacct 455

<210> 4271  
 <211> 286  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F4

<400> 4271

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 gccacagcag ccaattcaga actgaagtcc tgtcaaaatg ttgggtattg gtactgctcc 120  
 aactgctcgg caggagaatg caaccccggt ggtcaccagc cttccgtatt tcttaatttg 180  
 tgggttaacag taaaaacttt gttgtattgc gtatcaacgt ttgaagaaaa accgtgagat 240  
 ataccgatg taaaaaaaaa aaaaaaaggc gggccgctcc agagga 286

<210> 4272  
 <211> 448  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F5

<400> 4272

ggtctaggac tcccgggccc acccacgcgt ccagctggtc ctcgaggcca tggattgcgt 60  
 cctcatcgag atcttccagg tgtacggcga gatatgcacc ggcacgcgc ggttcctcat 120  
 cagcggcggt cagggcggac cggcgatgct gacgacccgc aaggaggtca tggcggcagg 180  
 ggtgaagggtg ctctggcggg cggcggagca gagcgctcag ctctcgctct acttcgacct 240  
 gtgccgcgag ctcggcgtgg ccaacgcgcg caagctcccg acatcattag ttcgcttgaa 300  
 agacgacgac gtccgggacc tcgagcggat cctcatgagt gagagtgaca tccagaacga 360  
 aagcgggtgag gaggcggagg cggaggcaga ggcagaggca gagggggcgg cggacgtgaa 420  
 ggacgcgggg tcaacgtcga cgaacact 448

<210> 4273  
 <211> 68  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-008-Q1-E1-F6  
  
 <400> 4273

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 ggctgtcc 68

<210> 4274  
 <211> 461  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-008-Q1-E1-F8  
  
 <400> 4274

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 ttctcgctgc tgcagatgat agtggggatg ttaagattgt caataccatt cagaaatgcc 120  
 tgtataaaag attaagggaa gccacacaa gtatttgag cagcgtgcaa ttcattcctt 180  
 ggagaccttg gacagcaatt actgggggcc ttgactcaa gctggctgca tgggatttct 240  
 ccaaaggacg aacactgttt tctattgatt atggatcacc tgaattgcaa aacggcagtt 300  
 cttccggtag tgcagggcaa tgtttcaacc ctgcttttgt tcattccgta gcagtttctg 360  
 aagaggatat tttgggaggg ctctacaagg tttgtgctgt tgcaaggggg gatgggtgctg 420

ttgatgtggt tgatcttgag tatgaactgg cccctgcgaa a 461

<210> 4275  
<211> 452  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F9

<400> 4275

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cggccgagca ccatgcgagg aaataacatg ccgcggcaca cgtcgccgtt actttttgcc 120  
ttgttggcga ccctgctcag cgtcggcgac gcgttggtcg tcgacggcct gcaggtgggg 180  
ttctatggaa agacgtgccc ggcgggccgaa ggcgtcatca ggcacatcgt caacaacgaa 240  
atcgctatgg accgggggat ctcccctggc ctcattegcc tcttcttcca cgactgcttc 300  
atcacgggtt gcgacgcttc cattctcctg gacgagtcgc ccgcggcgga cgtcccagag 360  
aaggagtcgt ccgccaacgg cttcacctcg gtcgggctca gaaccatcga catcgccaag 420  
tccaccgtag agggcatgtg ccccggaag gt 452

<210> 4276  
<211> 431  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G1

<400> 4276

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caagttccgc tccgggaact cctccgggtt cccctcctcc ccaacaactc caacaaccgg 120  
aatgaacctc agtcaagcc tcaactccgtt tcggtttcaa caaatctcc aaaactgagc 180  
atgattcccg gtggtctgcc tcatggaaat gggctgctca cagcaagcac tacaccacta 240  
aggatcatatc ggcagtcata gtcgtggccg ccggtgtcgg gatttgtact gtcacggatg 300  
tcgaggtcaa tgccaagggg ttcactctcg cttgcgtggc agtggtctgc acgtcgcttc 360  
aacagattac aattggctcc tttcagaaga agtacaacat tggatcattt gagctgctga 420  
gcaaaactgc g 431

<210> 4277  
 <211> 459  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-008-Q1-E1-G10  
  
 <400> 4277

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ggacgacgcc gtgcgcggcg gagcggccgt tgcgtgcgca gggccggcgc cggcctcgct  180
gtcttctagc aggaagcagc atcagcagcc cgacgacgcc ggctgcggca gcagcgacga  240
ccactaccag cacgacgtga taatgctgag gcggtcgagg agcggggcggg cgttcgcgcc  300
gccgatctcc gtgatcggca agggcgggcg gccgtggctc tgccctgcggg cgcaccgcga  360
gggtggacgc ctcgctgtgc ggcatatgcg cctgccgtcg catgagctgc tgcagccctg  420
caaggaggac ggcaggttca agctcctcat gcacccggg                               459
  
```

<210> 4278  
 <211> 333  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-008-Q1-E1-G11  
  
 <400> 4278

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aaattgtata gaatgcaaca ctggtctcca catttccctc tatggtgtaa tatagagaac  120
tccacgacgc tatacatggt gtgccaccaa ttaaccggag ttaattagta gcaagaagga  180
ttaattagcg ccgtgcatgc atccatgcgg cgatgggctg gccagtaata attataatta  240
aggagaagac acgaagcgta tagtacgttt aatcatttaa gccgacttgt tgcggttgtg  300
gtgctccggc ttgccggcgg ccgctctaga gga                               333
  
```

<210> 4279  
 <211> 438  
 <212> DNA  
 <213> Zea mays



<223> unsure at all n locations  
<223> Clone ID: LIB148-008-Q1-E1-G2

<400> 4279

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gatgaagaaa gtggcatcat cgtcagccgt tctcttcgtg ctagccctga cgctagtgtg 120  
tgccccgctg atagcagagg caaagaagaa gagagtcgcc gccgccgccg ccgaggagaa 180  
gaaggtgcac gacaacttct gctcgacgct gtgcgaaggc acgaagggga tggacctgnt 240  
ggtgtgcaag gagtcctgcg acctctcaca gcgctccaac ctggtgctgt acggccggat 300  
tcagtgcagg ggcaagtgc cagagcagaa ggggatcacc gcgccgcaga tgaaggtgtg 360  
ccaagaggcg tgcgacaagg actacgtggt caaggcggct ganggtcaca aggcctgcaa 420  
caacacctgc gccaaagga 438

<210> 4280

<211> 470

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G4

<400> 4280

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gtccgacaag tccatcttcc tcaactgcaa gatggacggg ttccaggaca cgctgtacgc 180  
gcactccaaa gcgcagttct accgcaactg catcatctca ggcactgtgg acttcatctt 240  
cggcgacgcg gcggcggtgt tccagaactg catcctgggtg ctgcgccgcc cgatggacaa 300  
ccagcagaac atcgcgaccg cgcaaggccg cgcggacgcg cgccaagcac cgggttcgtg 360  
ctccagaagt ggcagttcca ggccaagcc gcgctccggg actccgggcy cccgcccatc 420  
cgcaactacc tgggcccggc gtggcgcgag tgctcgcgca ccatcgtcac 470

<210> 4281

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G5

<400> 4281

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catccgctcc acaggatcct ctgcgccacc gcaaccgtgt gaccgcccgt gccgcccggc 120  
atcccgatcc gccgaccgt cccagccccg ctgcagcca tgtcgccgtc ggagccgacg 180  
cgggaggaga gcgtgtacat ggccaagctt gcggagcagg cggagcggta cgaggagatg 240  
gtcgagtcca tggagcgctt cgcgcgctac gccgggggcg ccggcggcgg ggaggagctc 300  
tcggtggagg agcgcaacct gctgtccgtc gcctacaaga acgtcatcgg cggccgcagg 360  
gcctcgtggc ggatcatctc ctccatcgag caaatgagg aaggccgcgg gaacgaggcg 420  
cacgccgcac ccatccgcgc 440

<210> 4282

<211> 462

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G6

<400> 4282

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aacaatacct ctctagctcg ccaccaacaa tggcctctag gttctccatc atgctcgcca 120  
caacggcact ggctacgttt tttgtgattg gttcgtgcac cccccgctc accttcaagg 180  
tcggcaaagg ctccaagcct ggccacctgg tcctacccc caacattgcc accatctccg 240  
aagtggagat caaggagcac ggtggcgatg acttctcctt tgagctcaag gagggcccgg 300  
ccggcacctg gacgcttgac acaaaggccc cactcaagta cccctctgc atccgctttg 360  
ccatcaagtc tggcggctac cgcacgcgg atgatgtcat cctgaaaat ttaaggccg 420  
acaccaccta caagaccacc ctcagcatct gatcatcctc tt 462

<210> 4283

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G7

<400> 4283

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cctgacctcc gctgccatag tcggccacga cggcgccgtt tgggcccaga gcaccgcatt 180

cccacagttc aagacagagg agatgaccaa catcatgaag gacttcgacg agcccgggtt 240

cctggccccg accggcctct tcctcgcccc caccaagtac atggatcatcc aaggcgagcc 300

cggcgctgtc atccgcggga agaaggatc tggaggcata actgtgaaga agacagggca 360

agcgatggtg gtcggcatct acgacgagcc catgaccccc ggccagtga acatggtggt 420

cgagaggctc ggcga 435

<210> 4284

<211> 453

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G9

<400> 4284

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gccgctcctc ttcacatggc acgggatcca gcagaggaag aactcgtggc aggacggcat 120

gccgggcacc atgtgcccga tccagcccaa caccaacttc acgtaccact ggcagcccaa 180

ggaccagatc ggcagcttct tctactacct cagcaccggc atgcagcggg cggcgggcgc 240

ctacgggctg atcagcgtcc acagccgtga cctgatcccc gtgcccttcg acacgccggc 300

cgacgacttc ccggtgctca tcggcgactg gtacaccaag gaccacgccg tgctggccaa 360

gaacctggac gccggcaagg ggatcggggc gccggcgggg ctggtgatca acggcaagaa 420

cgagaaggac gcgtcgaacc cgcccatgta caa 453

<210> 4285

<211> 451

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-H11

<400> 4285

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 cagagggccc tcacctgggc cgctcgccgt tgtgtccatt cggggcaaac acagagacct 120  
 cgggagcctg ccgcacctcc atcgagcggg acggaagaat ggtgggagaa cagagaaact 180  
 ccaccgccat ggcccggcgc cgcgcctcct ctggtgcact ggtaccgctg ccatgtgccg 240  
 tgcagtgcgt tgggtgggatc ctgtcgtcgt ggtgggaatc cagcggccct gggtaattcg 300  
 ggtgtgcgcc cacatttggc ctcggtgacc agctacagga ttccgccgac atctccagt 360  
 caaatcatgt ggtcattccg ggtggattga tgccggggga ccctgggatt gttcaccgga 420  
 aaatctacac agcggcaaag cgactctgag c 451

<210> 4286  
 <211> 456  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-008-Q1-E1-H2  
  
 <400> 4286

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 cgacaacttc acggtcccgg gggaagcttc ccttgccacg tccggcaagt cgggtcaagtc 180  
 cctgtgcgcg cccaacctat acaaggagtc ctgcgaaaag aactgtccc aagccaacaa 240  
 tgggaacgag aaaccaagg aagtgttcca cagcgtgggc aaagtggcgc tggaatccgt 300  
 ccagacgggg tccaacagtc caagtcgatc ggcgaggcca agggcagcga ctccatgacc 360  
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 atgctcgaga tggccggcgg cgacatcaag gtgctg 456

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 <211> 400  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
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 <400> 4287

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 tcaagttcca agagctcaag tcgaagcgaa gcttccgggt caacaagttc aagattaacg 180  
 aacaaacgca acaagtgggt ggggacaagc ttggggaacc gggcgaaaac tacgacgaac 240  
 ttcacggctc catgcccga aagcagtggt gctacgccgt cttagatttc gactttcaca 300  
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 gggtcangag caagatgctg tacgagagct ccaaaggacg 400

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 <213> Zea mays  
 <223> Clone ID: LIB148-008-Q1-E1-H5  
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 ccggccggcg gagctcacgg cttgccgctg cattgccatc gtgtcacttg tacacaatcc 180  
 accaatctga ttggattcgg ggggatgctt gggcaaattc gagaatttgc tcaggcattc 240  
 gttccgattg cggctagcta gctgatcgt taatcactcg acacgggcaa atttgcacgg 300  
 cgacgacgat gggcatcttg tgttgtttcc agtccacac cagcgatcac gctgttgctt 360  
 cgtccccggc tacctcttcg tctctgccc cctcgtcgtg ccgaaacaac gatcgccgtg 420  
 ctcccccca gcggcaggcc cccggcgagg agaaga 456

<210> 4289  
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 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-008-Q1-E1-H9  
 <400> 4289

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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaataa aaaaaaaaaa 120

aaacaaaaaa aaaaaataat aaaagggggg gcccccccaa aggttctaata tttattttcc 180  
 tttcaatgca atttcttctc ttttcaaaag tttcccaaata tttcatttaa ggggcttttt 240  
 ttttaaaact ttttaagggg aaaacccttg ggtttcccaa tttttacccc ttttaaaaaa 300  
 atccccctttt cccaacttgg tttaaaccta aaaggcccca cccctttttcc ctttcctaaa 360  
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 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-009-Q1-E1-A1  
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 agacaagatc tgcgccatgg cggcaacgac gacggggatg cagatgatgc acgcggcggc 180  
 gttgccgctg tgcctggctg tggtggcagc atctacgcgg gtcgcgctgg gcaactgccg 240  
 cgacgactgc atggctgcat gcaacggctg gaccaacgtc tgccagctca cctgtgccag 300  
 cgcatgctac agagaactcg ggatcagaac cttacgtacc tcggctgtat tagctaaagc 360  
 agaatgccct gcatcagcac cacatgcaac acaagagcga agcgccg 407

<210> 4291  
 <211> 450  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-009-Q1-E1-A10  
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 ccaccgccgc cgccgcattc agggatggag atgaagaaga tcgcctgcgc cgtcctcgtc 180  
 gccgcctcgg cggccaccgt ggcgctcgcc gcggaggctc cggctccggc cccaccagc 240

ggctcctccg ccgtcgcgcc cgccgtcggc gccgccctcg gggccgccgt cgctccttc 300  
 ttgcctact acattcagtg agccggccgg ggcgccgga ggccgaggaa gagacgacgg 360  
 ggagagagag tgacatggct gcgcgcattc cgatgcgtgg gcatgttttt tgattcgaca 420  
 caccttttgt cctctttttc attgttcctt 450

<210> 4292  
 <211> 438  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-009-Q1-E1-A2  
 <400> 4292

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 cctcgtcgtg gccgccctct cgccgcgcgc gcgcgcgcag caggtgccgc cgggtgggcgg 180  
 cagcgtcttg aagccggact actacagcca gtcgtgcccg cgcgcgagga ggatcatcgc 240  
 ggaggtgatg cagacgaagc agatggcgaa cccgacgacg gccgcgggca tgctgcgcgt 300  
 cttcttcac gactgcttcg tcaccgggtg cgacgcgtcg gtgctgatcg cgtccacca 360  
 gttccagaag tcggagcacg acgcggagat caaccactcg ctccccgggg acgccttcga 420  
 cgccgtggtg cgcgccaa 438

<210> 4293  
 <211> 397  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-009-Q1-E1-A4  
 <400> 4293

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 acatgctgtt tgcgagggct tcttacagcg ctcaaaaccg tactttcatc ttactgcaca 180  
 tctttaatga agatctagac ttctcatcgg acacttcggt cacctctcca aactcacgt 240  
 ctctaataac atgactcctg aaccggtaat cgagcagtag gctccgctac cccggagggc 300

cagacaacgt cccgacccac ccttacttct cagctctaac atgggacatg atcacgtctg 360  
 tgtgcacacc accttaaagt tctccttatg gtgatca 397

<210> 4294  
 <211> 311  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-A5

<400> 4294

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 cggacgccgt tcaaggcca gaaccgcaag gagacgttcc ggaacgtgct gcagcaggag 180  
 ctcgagttcc cgggggacac ccggtggcgg acgccggagc tcgcggatct catctcgggc 240  
 ctgctggagc gggacccgaa gaagaagctc gggtagccg gcggcgccga cgaagtccgg 300  
 gcccaaccgt t 311

<210> 4295  
 <211> 407  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-A7

<400> 4295

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 aataccagct taccaacaac agcagcagca agccacccg ttgcagaca tggcccgcc 120  
 cggcgccggc gccgtgttgg cgctcctagt ggcggtcgcg gcggtggcgg cgttcctcgc 180  
 ggtgccggcc tcggcgaagt ccggggagct gagcgcgatg gggttgctgg cggcgaaggg 240  
 cggcagcggc gcgggcccgc agaagtgtc gggcgcggtg ggcgagtgcg acgtggacga 300  
 ggcggaggag ctcgggctga gcggcgggcg cctcagctcc gacgacggcg tcggcgggac 360  
 gctggcgtag cggaagccga ccaaccgta catcagctac gcggcgc 407

<210> 4296  
 <211> 463  
 <212> DNA



<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-009-Q1-E1-A8

<400> 4296

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aaaaatacca gcttaccac aacagcagca gcaagccac ccgttcgacg acatggcccc 120

cctcgggccc ggcgcggtgt tggcgctcct agtggcggtc gcggcggtgg ccgcgttcct 180

cgcggtgccg gcctcggcga agtcggggga gctgagcgcg atgggggttc tggcggcgaa 240

gggcggcagc ggcgcggggc cgcagaagtg ctcgggcgcg gtggcgagtg gcgacgtgga 300

cgaggcgagg gagctcgggc tgagcggcgg cggcctcggc tccgacgacg cgggtgcggcc 360

gacgctggcg cagcgggaagc cgaccaaccg gtacatcagc tacgcggcgc tgcncgcgga 420

ccaagtgccg tgcaacaagc gcgggcggtc ctactacagc aac 463

<210> 4297

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-A9

<400> 4297

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atggacctgg cccgggtcgg ttgcaacaaa ggattccaat aacttcgagg tttgcaacga 120

attgctcgtc agatctggat tgcgtgagac catctagtgc cccaaaagct tctggtttaa 180

caaacggagg gggctcagct gcaagaaagt cccaactgaa gggtgcaaaa agttcagaca 240

tcagaggagg gaatcctgca aaaaagtcac cgcccttaca gaaaaagctg agtgctccct 300

caccaacggt aactaagaag agcgggaactg aaggaaagaa aactccaaat ggaaaaacag 360

gagccaagaa gtaagcaact cagttgaaac ttcgttttgt tgggaccaac ttcaccatgg 420

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<210> 4298

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-B10

<400> 4298

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cgggcatgac gatgacacgg acgatgtgcc taggcctgct gcttctacta ctggcggcgg 180  
cgtagcagc gacggcgcac ttacgggtcg gcgatgtgga tgagtacgtg tccaagcgca 240  
cgcaggagtc ccgccacagg aacaacgggtg gcgcgggcat cgatgacctc atctccagt 300  
cgccgcgctt ccacgccaac gtggatgcac gcgcctatgg ccgtagatcc gacctgcagg 360  
aggaggcaac agctaccgta ataaccaaag cggaagcaca agaggcttca gctgaagggtg 420  
gcgattaacc tacctaacca tatta 445

<210> 4299

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-B11

<400> 4299

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tggtgcacga ggccgccgtc gcgctgcgga gctgaccggc cgggcccggga cgggaccgaa 180  
cggaagccta cgatcgactg tacatacagg ggttgggact tgggagggag ctccgggttct 240  
tggtgggttt tcctttgggt ggagagcgag ggagcgcagt cgagagccag cgagcagtct 300  
ctcgtgcagt gcagtgcagt gcagtgcagc tccggcgtag atgagattgt attgtgacca 360  
agccgggagg gaaagcaggg atgggaggac aaagatgttt tgtagcgttt caggctccgg 420  
ccatcgcccg agtttgt 437

<210> 4300

<211> 304

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-B2

<400> 4300

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ttgtatttct cgccgtgggc tcaactggcg ttctgggcgg ctacgatgtt atagatatcc 120

tggacgacat ccgcatctga tccagatatc agaattctct gcaagacagg atcgtagcgg 180

gagaggcaac tgatctacgg tcggctacgc aactgctcgt acgcgatcaa gttgacaaac 240

cgctggtttc acctgtaggc gataaagtcc tgcttgcctt ggagaaacat gtcattctca 300

ttta 304

<210> 4301

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-B4

<400> 4301

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ctcagccgcc gcaaccgcca catcagccat gggcgccctgc gcaaccaagc ccaagacgct 120

tgaggggcag gccccagctg aggcgcgctt ctccacaccc aagggttgcg ccgaggccac 180

tccaatctcc gttgaggttg cggctgatga acaggtatct gagaaagtgg tgggtggagga 240

gccggctcgc gcggccgacg ttgagcatca gaaggctaata gaggtgctcg ctccagacgc 300

ggccgtcgcc gagcccgacc acaaggagga ggaagccgtg gagaagaccg tcgtcgagga 360

agagatgcca acggcagcag cccatgcaga ggaaaaggtc gccaccgccg ccgag 415

<210> 4302

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-B5

<400> 4302

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ggaggaagaa gatggagagg gcggccccag tgaggagtcc ccacacctcc acggccggcc 180

tactcgcgtg gcctcaaccc gatggcgccg cgtcgcaggc accacgtcgg cctaaccagc 240  
cgacggagga attcaggaag gtggtgttcg gggggcaggt caccgaggag gccgacggtc 300  
tcaacaagac gaagatgacg acgacggcct cgcacccaa gtcgaaggag acaacaggga 360  
tcggcatgtt taaggccgag agcgccgccc cgcgcgtcac aactgcatcc cgtgatcgcc 420  
aagc 424

<210> 4303  
<211> 350  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-B7

<400> 4303

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gtacgggctg gtggagtacc gggcgctgcc ggcttacctg cgggacaacg agtacatcca 180  
ccgccactac cgctgcgagt ggccgctccc gcaggttctg ctctccgctt tctccatcca 240  
caacgagacc ctcaacgtct ggacgcatct tatacgattt ttcattcttc tcgctctgac 300  
catatacaca gcaacacaag ttccaaatgc agtatatatc cggagcttgc 350

<210> 4304  
<211> 450  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-H7

<400> 4304

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atgcggctag acgcctcgct acctgcggat gatgacctat ccaatgagac cgctcgcgat 180  
cgcccccca tcattctcaa cgccgtcgcg ctcggaata tcgatgctgg caagtcggct 240  
gtgtggaaca gctcatcgg ccacctgtg ctgcccacgg aaggggaaaa ccacgcgtcg 300  
cagaccgccc ggaacctggg cgcggcgga tcttgccggt tggctctgctg gtgaggccgg 360

aatcgctcac tagagccaac tcgtcgctt gcgcccgcg tatatcgtgg ccagcagctt 420  
 ctgctctaca atcgtggaa ataccgcctt 450

<210> 4305  
 <211> 432  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-014-Q1-E1-H8

<400> 4305

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 tcgtcgccat ggttgtggca ccgatggccg aggcaaagtc cgctgatgcc cctccgccc 180  
 acgccccgc ccccgctgct gacgcacctg ccgatggacc tagcggaccg gcgggtgcac 240  
 ctgggtcccca gggcgctcag ggtctatcgg gcaatgagga cgacgatgat gactccacca 300  
 actaaggcca agcacgtcgg tccggttgca tttgaacaa gacatggaag aaaagtgaga 360  
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 ctctncctct tt 432

<210> 4306  
 <211> 388  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <223> Clone ID: LIB148-015-Q1-E1-A1

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 ttgaaggcgg ctgctgagga agtgggcaag ccgagtgagg gcaacgcggg tccgggagac 180  
 tccggcagct acaaggactg gccggaggac acgggcttct tccgggcgga gggcggtcgg 240  
 agcacggagt acggggagtt cttcatgagc tggtagctgc agatgtcctt ggagcacggc 300  
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gtgaaggtgg ccgggatcca ctggcact

388

<210> 4307

<211> 456

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-A10

<400> 4307

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ttgaagagca tgagcatata acagctgatg ggtcaccttc caacggtgac aagttgagcg 180  
gcgtagcgaa tcttaaggct gggatttctc tgctcaatat aagactgagg gcacttgaag 240  
atgaccagga gtttctcaag cagggtgtga gttccctcca atgcggtagt gatggactgc 300  
agtgtataca ggagataagc ggccatctag cagagttgcg aagagttgtg actcgctaag 360  
gaaaatggtt ttgccccgag tccaaattgt taggtcatca tgaggtcttc tcatgcagca 420  
gactaacgag ggtgcttcca ctgagtgccc acaatc 456

<210> 4308

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-A11

<400> 4308

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catggtgaga aggaagagtc aaagggcatc gatgcgaaag cgtccggggc tgggtgggtcc 180  
ttcgacatca ccaagttggg cgcctccggc aatggcaaga cagacagcac gaaggctgtg 240  
caggaggcat gggcatcggc gtgcggcggc actgggaagc agacaatcct catacccaag 300  
ggcgacttcc ttgtcggaca actcaacttc acaggccctt gcaagggcga cgtgaccatc 360  
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tggatcgaga ttctacg 437

<210> 4309  
 <211> 423  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-015-Q1-E1-A2  
  
 <400> 4309

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attggcgggg aaagcgcaag aagctcagca gaaatggcgg agcaggcagg cgccggaagg  180
tactggtgcc acatgtgcgc cgcggtcgtg agccccgcgg agggcgaggc ggaggtgaag  240
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gccgatgacg gcgacgggtga cggcgcggtg gctcaagtgt acccgggcgc cgaccgcccg  360
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aac                                                                 423
  
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<210> 4310  
 <211> 299  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-015-Q1-E1-A3  
  
 <400> 4310

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tgctcctcgt catcgccgtc gtcctctcag acgtcacctc ctcgggcgcc ctggcctcct  180
cgtcgtcgtc tctgctgcac cagtcgtctc cgtctgagag tgagactgag accgacagta  240
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<210> 4311  
 <211> 428  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-015-Q1-E1-A4

<400> 4311

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gatcgagggc caccacctga cctccgctgc catagtcggc cagcagggcg ccgttttggc 180  
ccagagcacc gcattccac agttcaagac agaggagatg accaacaatca tgaaggactt 240  
cgacgagccc gggttcctgg ccccgaccgg cctcttctc ggccccacca agtacatggt 300  
catccaaggc gagcccggcg ctgtcatccg cggaagaag ggatctggag gcataactgt 360  
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gtgcaaca 428

<210> 4312

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-A5

<400> 4312

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gagctccaca ggatgctgaa cgaggatgag ctacgtgatg ctgtgctgct tgtttttgcc 180  
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cactccctgc gccagcgaca ctggtacatc cagagcactt gtgccacaac tggcgagggt 300  
ctgtatgaag gcctggactg gctgtccagc aacattgoga gcaaggcttg aggcctacct 360  
tgaatgtcaa ccgcgaactg actaggagct ccgatgtat catggaaact caggacagaa 420  
tcgcagttgc aac 433

<210> 4313

<211> 365

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-015-Q1-E1-A6



<400> 4313

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cgggccgcgc agcccagccc ggattacagc accgactacc cegtctccat cccggagttc 120

ggccacccgt cgcgcgcgag cagcgccagc tcagtcgagc gggatgaccg gcggcatcgt 180

ggagggcgcc ggtgagtacg tgatcgacag gtgtgagcgt gatgtgctga cgactaattg 240

actcctgcgc atccctgtca cgtgtgtata gcatatagtc gtcttgctgt aaaaggttat 300

ggcatactcc cctgtttaaa atgtacaggt taaatttggc ttacttcaac aanggattat 360

ataat 365

<210> 4314

<211> 206

<212> DNA

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<223> Clone ID: LIB148-015-Q1-E1-A7

<400> 4314

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gaaaaaaaaa aaaaaacaaa aaaaaaaaaa aaaacaaaaa aaaaaatctc caacacaagg 120

gttgacctca acgatgttcc acgattaggg gccacctcaa tccaacttca taacccttct 180

aatctttcac ggaacttcat gtctctc 206

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<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-A8

<400> 4315

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gtcgccatgc tagcgggtgt cgccgatgtc gccaacgccg gccacgcaa gccctgacg 120

cctggcgggc gcgtggtaca cgacaaccac ggcaagttca cggccggggc gtggaaacct 180

gcccacgcga cttctacgg cgggcgggac gggccggga ccacggcggg cgcgtgcggg 240

tacaaggaca cgcgcgagca ggggtacggc gtgcagacgg tggctgtgag cacggtgttg 300

tttggcgatg ggcggcctg cggcggtgc tacgaggtgc ggtgctgga cagccccagc 360  
gggtgcaagc ccgacgggc ggcgtgtg gtgacggcga ccgacctgtg cccgcc 416

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<211> 373  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-A9

<400> 4316

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aactgccgcy tccgtaggaa gtgctagtgc gtgtgcatca ctaggctgca gctttcatca 180  
ttggagatcg atcgcaacag tgcacggtt gtgtgtgat aaatcgtgtg tttggaatgc 240  
tgcccgatca tactggacaa ctgcaacagt gcttgccctt gcctgctggc cagcatcacc 300  
attggcgatg ggcgagcctg cggcggtgc tacgaggtgc ggtgctgga cagccccagc 360  
gggtgcaagc cca 373

<210> 4317  
<211> 398  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-B10

<400> 4317

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gcctgacgcc gaccgcccgc cgcggtggga gatcagcgtg ctctcccgcc ttgcgacccc 180  
gcacctcccc tcgtcctcgt gcttcaccga gacggacgac cttctcgcgt gggccgtccc 240  
ctactgctcc ggcggcgacc tcaacgagct ccgctactcg ctccccgacc gcattctctc 300  
ccccgcggcc atccgcttct acattgccga gatcgtctcc ggggtcgccg agctccacgc 360  
cgcgggcgtc gtgtaccgcc acctcaagcc cgacaacg 398

<210> 4318

<211> 287  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-015-Q1-E1-B11  
  
 <400> 4318  
  
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 ctgaccatcc aatccaaact caaaagaaca aatacgaaag aagcgtagtg aagggaaca 180  
 aatgaatgga tatatgtaat cttgagatgc atgccctctc aaatcactgt actgggggttc 240  
 tcaaaaaaat cattgtaatg ggagttatat atataacttt atctcaa 287

<210> 4319  
 <211> 417  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-015-Q1-E1-B12  
  
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 acgaagattg acttctgtca aacatcagat gggaagctta taacagaaat tgatgggaaa 180  
 caaattgggtg ctgttcggag caaagatctt tgcaaggctt ttttcgacat gtatattgggt 240  
 gattcaccgg tttcactgga ggccaaaaaa gtcgttgccc agaacgtggc tgggctcatt 300  
 ggaagacgct gaggatagcg agaggatgggt tatttcattc ttctgtacag ttagagagga 360  
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<210> 4320  
 <211> 319  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-015-Q1-E1-B3  
  
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cagcaggaac caggacaagg aagtgctgaa ggtagccatg gtctgcaaga cacaaaggag 120  
caggacataa taaagggaaa ggcggctctt gtttccactg aactgctgag ggaggatctg 180  
gttcagagtg ctgttagttt tctgaaacac ccgaaagtag tagcctcttc agatggacag 240  
aggcgatctt tccttgtaaa taaaggactc accatggatg aaatagatga agcatttcaa 300  
cgtctacaaa acccgtcac 319

<210> 4321  
<211> 394  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-B4

<400> 4321

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aggcgacgac accaccctag gctctgtcct cgccgcagg gtaagattgc agcagcagtg 180  
aatttgggag cttgaagcat tcctctgaga catggaaaaa gtgatctgct gggcatatct 240  
ccttcaacgc aagcagttct cgaaagaaac tcttgattgc tgtgtcgtag ctctgtggaa 300  
cactcctctc ccctctctcg tgaactacac atagtgatta tatgttccct ctatgtctaa 360  
cagcaagcag gctgatgcga tattttgctg aagt 394

<210> 4322  
<211> 432  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-B5

<400> 4322

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cgtcgtgtcc ggcaacctcc gcggccgtgg cgggcgcgag ggccgatgac gccctgcgcc 180  
agcgcccgcg ggggctcgtg caggtccggg agcgggacca gggcccgtg tcgacggggc 240  
accagcacct gcaccacat caccaccagc tgcggcggtc ggcgggcgtc ccaccccgcc 300

gcccggggcc ggggcgcgc cctcctcagc gctgcgaaag cgacctcaac atcagggagc 360  
 accgctcctg cagcgaggtg gccggcggca acgcggcggg ctgcgcgcgt gtgtgctgct 420  
 gcttccccctg cg 432

<210> 4323  
 <211> 415  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-015-Q1-E1-B6  
  
 <400> 4323

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 ggacctcttc cgcaagtgc tggagcccgt ggagaagtgc ctccgcgacg ccaagatgga 120  
 caagagcagc gtgcaggacg tcgttctcgt gggcggtcc actcgcatcc cccgcgtgca 180  
 gcagctgctc caggacttct tcaacggcaa ggagttgtgc aagagcatca acccagacga 240  
 ggctgtcgcg tacggagcgg ccgtccaggc cgccatcctc actggcgagg gcaatgagaa 300  
 ggttcaggat ctgctcctgc tcgacgtctc gccgctctcg ctccggcctgg agacggccgg 360  
 atgcctcatg actgtgtctc tcgccaggaa caccaccatc ccgactaaga aggag 415

<210> 4324  
 <211> 398  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-015-Q1-E1-B7  
  
 <400> 4324

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 taatgaagag ccgcagcatg gcatcatcgg ccgcgctctt ggtgctagcc ctgcgctag 120  
 tggcggccac cccccacag gtagcggagg caaagaagaa gagagcggcg gagagcggcg 180  
 aggcggcgga ggcaagaag atccaggacg acttctgctc gacgctgtgc gagggcaaga 240  
 aggggacgga cctggtcgtg tgcaaggagt cctgcgcgct ctcccagcag tccaacctgg 300  
 tgctgtacgg caggatccag tgcaagggca agtgcaccga gcagaagggc atcacggcgc 360

cggccatgaa ggtctgccaan gaggagtgcg acaaggcg

398

<210> 4325

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-B8

<400> 4325

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gcggcgccac tgggaagcag acaatcctca taccacggg tgacttcctt gtcggacaac 120

tcagcttcac aggcccttgc agtggcgacg tgaccatcca ggtggatggc aatctgctgg 180

cgaccacgga cctaagccag tataaggacc atggtaattg gatcgagatt ctacgtgtgg 240

ataacctggt catcacgggc aagggaacc ttgacgggca cggcccagcc gtgtggagca 300

agaactcctg cacgatgaag tacgactgca agatccttcc caactcgctg gtgatggact 360

tcgtgaacaa cggggacgtg tccggtgtca cgctgctcaa ctccaagttc gtccacaatg 420

aca 423

<210> 4326

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-B9

<400> 4326

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ggaggagtgc gcagcgtact gccggagggg aaagggaagg agaagggtgg aaatggagga 120

ccggcatgtg gccaaagtcg ctctcggcgg ggacccccaa gtggcactgt ttggtgtgtt 180

cgatggccac ggcgggaaaa acgcggcaga gttcgccgcg gagaacatgc ccaagtttat 240

ggccgaggag ttgacgaagg taaacggcgg agagatcgaa ggagcgggtga agaggggtta 300

cctcaagacg gacgaggagt tcctcaagat ggacgagagc gggggcgcggt gctgcgtcac 360

agccgtcctc caaaagggtg gactggtcgt ctccaacgct ggagactgcc gtgcggtgct 420

c 421

<210> 4327  
 <211> 446  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-C1

<400> 4327

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atcaaactaa cgtagccatg gaagaagctc cacgtcattc catgtagtta cttcttcaga  120
gcgcgcggtg gcgggccggt agaagctttg ttcgttgcac ttgaattcat caccaaagga  180
gaaggcgctt gttggcgctt caccaattcc atcccatcgc cacaaggctc tcgatcacgc  240
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gcgacaggat ccagccagcc acgatgtcgg cggccggcgc caccgccgtc tgcacgaagg  360
acggcgccct cctcccgtg cgcccgact gcgcgaggtc gtctctctcc ttcgccgccg  420
ccgccgccgg catcgtgatc tacctg                                     446
  
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<210> 4328  
 <211> 452  
 <212> DNA  
 <213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-C11

<400> 4328

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ctgctcctct gccacctcgc caccaccgcc tccgccacc agaaagacat ccacgtcctc  180
ggcagcgtcg acggctccag cgacggcagc agccccgagt ccgaaggccg cgtcgtctac  240
gcggacatga agctggctga tacggaatcc gatgcgccgg cgccggcgcc ggccgccggg  300
ccgtcgtccg gttgaactga gaagcgtgcg tccagccaag caaggtggtc aaaaccgaga  360
actaattaag ggctcgattg tgtgtccggc tactactgtt cttgccataa ttatatatag  420
atacgcaaag tgtggccaag cctaccaca tg                                     452
  
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<210> 4329

<211> 410  
 <212> DNA  
 <213> Zea mays  
  
 <223> Clone ID: LIB148-015-Q1-E1-C12  
  
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 catcgacatc gccaaagtcca ccgtagaggg catgtgcccc ggcaaggtct cgtgcgcaga 180  
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 cgcgggcggg cgccgcgacg gcatgcgctc gaacatggac gacctcccg gcaacttccc 300  
 cgtgccgggc caccacgtgc cgcgcctcac cgagctcttc agccagcggg ggctctccca 360  
 ggaggacctc gtctgtctct ccggcgcgca ctccatcggc ggcgcgcaact 410

<210> 4330  
 <211> 421  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB148-015-Q1-E1-C2  
  
 <400> 4330

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 ggcagcaacg ttccgtccg gtcaggaacc gccaacgtc tcttcgctt cggcctgtcc 300  
 gggcagccgc tccgctcca cgacccgcc gccgcgccg gcctcccgga catcgacacc 360  
 ttccgcgga agctcgancg gctgctttct cccggacgac acgaccccg ctggtcgcgc 420  
 c 421

<210> 4331  
 <211> 421  
 <212> DNA  
 <213> Zea mays



<223> Clone ID: LIB148-015-Q1-E1-C4

<400> 4331

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agcggccatg gcctcgattc cggcgacgac cttcgccgtc atcttatccg tcctcttctg 180  
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ctattgcgac acctgccgcg cggggttcgt gaccaatgtc accgagtaca tcgcggggcg 300  
caaggtgagg ctggagtgca agcacttcgg caccggcaag ctcgagcgct ccatcgacgg 360  
ggtgaccgac gggaacggca cgtacacgat cgagctcaag gacagccacc aggaggacat 420  
c 421

<210> 4332

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-C5

<400> 4332

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aaagcgtccg ggcttggtgg gtccttcgac atcaccaagt tgggcgcctc cggcaatggc 180  
aagacagaca gcacgaaggc tgtgcaggag gcatgggcat cggcgtgcgg cggcactggg 240  
aagcagacaa tcctcatacc caagggtgac ttccttgctg gacaactcaa cttcacaggc 300  
ccttgcaagg gcgacgtgac catccaggtg gatggcaatc tgctggcgac cacggaccta 360  
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<210> 4333

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-C6

<400> 4333

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acctcatgtg cgagatcgag ggccaccacc tgagctctgc cgccatagtc ggccacgacg 180  
gcgccgtttg ggcccagagc accgcattcc cacagttcaa gccagaggag atgaccaaca 240  
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ccaagtacat ggtcatccaa ggcgagcccg gcgctgtcat ccgcggaag aagggatctg 360  
gaggcataac tgtgaagaag accggacagg cgctggtga 399

<210> 4334  
<211> 388  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-015-Q1-E1-C7  
<400> 4334

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gccccggcc accatgcgtc gtgtctgctc gcgcacgcac gcattgaacg ggagatagaa 180  
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ccgtatagta atataaaca attttcac 388

<210> 4335  
<211> 379  
<212> DNA  
<213> Zea mays  
<223> Clone ID: LIB148-015-Q1-E1-C8  
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gcttcctggtt gttcatcgtg gggcgctgg ccggcacggc cgcctacttc ttcttcgtgt 240  
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<210> 4336  
 <211> 424  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-015-Q1-E1-C9  
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 cagcagtcca acctggtgct gtacggcagg atccagtga agggcaagtg caccgagcag 360  
 aagggcatca cggcgccggc catgaaggc tgccaggagg agtgcgacaa ggcgtacgtg 420  
 gtga 424

<210> 4337  
 <211> 403  
 <212> DNA  
 <213> Zea mays  
 <223> Clone ID: LIB148-015-Q1-E1-D1  
 <400> 4337

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 gaacacagtg ccgtacaagc tgttgccaac tactgccatg acctacgtga gttacacctc 180  
 accagaagct tcaggcttat tgaccgctcc ttgtatgcac tggcccatgg atgccacgg 240  
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agctgccgct gtagtcacct caagtgcctg aacttgtgtg gatacgtaca ggctgttact 360  
gacacagctt tgcacgctat tgctcacaac tgtgggcagc tgc 403

<210> 4338  
<211> 410  
<212> DNA  
<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-D11

<400> 4338

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tgctcagcgc caacagctcc cgcgacgcct ccagctacct caccttcggg cccaaccggg 180  
cggatgatggg tccgggcacc atggagacgg acatcctgta caacgtggac gtgaagcctg 240  
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aggtgtggga cgccgagagg tttgtgggcg gcggtgtcat cctagacacg agcacgtcgg 360  
tgacgtcgct ggtgccggag gcgtacgcgc cggtgacggc ggcgctggac 410

<210> 4339  
<211> 421  
<212> DNA  
<213> Zea mays

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